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ABSTRACT

The certificate and diploma programs in seven 2-year colleges of New York State were studied to determine conditions under which such programs succeed and to advise other 2-year colleges of the feasibility of operating such programs or modifications of such programs. Specific objectives of the study were: (1) to view certificate and diploma programs in terms of administrative and fiscal support levels, curricula, staffing patterns, selection, counseling, instruction and placement of students, regional relations, and attitudes toward programs of key parties involved; (2) to determine conditions under which programs or program elements achieve success as measured by program goals and the judgments of on-site personnel as to how well these goals are met: (3) to suggest conditions under which program or program elements may be successful if used in other two-year college settings; and (4) to report findings and recommendation to the New York State Education Department and other appropriate agencies and individuals. Procedures employed in the study were a literature search, on-site visits to each of the colleges, interviews, requests for written information, and a student questionnaire. The study findings, which are presented in detail, relate to Administration and Organization, Student Personnel Services, Instruction, Regional Relationships, and The Responsibility of State Government. The views of students as to recruitment, program quality, and college services are provided. Forty-one recommendations are made. Appendixes are the Request for Data; Sample Interview Schedules; Individuals Interviewed; Letter, Student Questionnaire, and Results; and Selected Written Sources of Information. (DB)

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A Project Report

EVALUATION OF SELECTED TWO-YEAR COLLEGE CERTIFICATE AND DIPLOMA PROGRAMS

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I INTRODUCTION

Purposes

The study was designed to undertake an intensive examination and evaluation of certificate and diploma programs in seven two-year colleges of New York State--the Agricultural and Technical College at Alfred, the Agricultural and Technical College at Delhi, Hudson Valley Community College, Orange County Community College, Sullivan County Community College, Tompkins-Cortland Community College, and Ulster County Community College--in order to determine conditions under which such programs succeed and to advise other two-year colleges of the feasibility of operating such programs or modifications of such programs. Specific objectives of the study were defined as:

A. To view certificate and diploma programs in terms of administrative and fiscal support levels, curricula, staffing patterns, selection, counseling, instruction and placement of students, regional relations, and attitudes toward programs of key parties involved.

B. To determine conditions under which programs or program elements achieve success as measured by program goals and the judgments of on-site personnel as to how well these goals are met.

C. To suggest conditions under which programs or program elements may be successful if used in other two-year college settings.

D. To report findings and recommendations to the New York State Education Department and other appropriate agencies and individuals.

The following questions were prepared to elaborate on the purposes of the study and guide design and procedural stages:

1. Within the framework of institutional long range goals and development plans, what are the program goals for each of the designated diploma and certificate programs? How and by whom are these goals set, met, reviewed and revised?

2. On what criteria and by whom are curricula developed for each of the designated programs? How do curricula provide for cumulative experiences, developmental knowledge and skills, adequate preparation for job entry? How are curricula articulated with secondary school level programs, with other offerings of the institutions, with job requirements? How and by whom are curricular decisions made, reviewed, changed?

3. What are staffing patterns for each program? How are staff selected, by whom, and on what criteria--how are staff evaluated and rewarded, and by whom and on what criteria? How do staff compare and contrast in selection, standards and status with institutional staff of comparable rank in other programs? Is staff part-time or full-time?

4. How and by whom are students selected for each program? How and by whom are they instructed, counseled, evaluated, graded, placed, and followed-up? Specifically, how are theory and practice related in instruction? What are success and failure patterns in school and later on the job? How does the treatment of students in the designated programs compare and contrast with that of students in other programs?

Specifically, how and by whom are disadvantaged students assisted in overcoming learning handicaps?

5. What are the administrative support levels for each designated program as these can be judged by fiscal support, input per student, teaching loads and supports, counselor to student ratios, learning resource center and other instructional support levels per program, etc.? How does the administrative support level for each designated program compare with that for other programs in the institution? How and by whom are administrative support decisions made affecting designated programs?

6. How are programs managed within the college's region? How are students and staff recruited? What are relations with area school districts, BOCES, private schools, other collegiate institutions? How and by whom are employment and job market data assembled, reviewed, revised? Specifically, what are the roles of employers, personnel managers, labor union officials, BOCES occupational instructors and administrators in the region? To what degree does each program appear to be utilizing effectively resources of the region?

7. How does the "environmental press" of the institution affect students in the designated programs in comparison with students in the institution generally? What appear to be the institutional "images" of the certificate and diploma programs in contrast to other programs? Do diploma and certificate bound students, generally, take a full part in co-curricular and social activities, in athletics, in publications, etc.? Are there hard data on which to judge these questions?

8. To the degree to which it can be determined, what has been the record on job entry, job growth and job satisfaction for graduates of each of the designated programs?

9. What plans does each institution have for programs designated "successful", "promising" and "unsuccessful"? What new or expanded programs are contemplated? How and by whom will decisions of this sort be made?

10. What are the attitudes concerning each program, or program element, of students, staff members, administrators, counselors, employers, others?

11. In general, are designated programs housed and equipped well enough to get assigned work done? What appear to be strengths, deficiencies, urgent needs? How and by whom are decisions in this area made?

12. In summary, what conditions appear to support or facilitate certificate and diploma programs designated as "successful", "promising" or "unsuccessful"? What conditions appear to block or inhibit programs in all three designated categories?

13. In summary, under what conditions have certain designated programs been "successful" or "promising" or "unsuccessful"? What are conditions under which certificate and diploma programs are likely to be successful or unsuccessful in other institutions?

Sample

The Bureau of Two-Year College Programs, New York State Education Department, proposed six institutions as the sample for study: Alfred, Delhi, Hudson Valley, Orange, Sullivan, and Ulster. At the suggestion of the investigator, Tompkins-Cortland was added to the sample because of certain newer certificate programs being operated there. The sample of seven colleges was considered to be well representative of institutions offering certificate and diploma programs and to contain examples of most of the normally offered programs of these types. Except in the case of Tompkins-Cortland Community College, most programs are operated within the regular academic schedule.

Certificate and diploma programs at the seven institutions studied follow:

Agricultural and Technical College at Alfred: automotive service, building construction, business office skills, drafting, electrical construction, food service.

Agricultural and Technical College at Delhi: automotive mechanics, beginning office worker, carpentry, drafting, electricity, institutional grounds keeping, masonry, practical nursing, plumbing and pipe fitting, refrigeration and air conditioning, secretarial studies, welding.

Hudson Valley Community College: automotive mechanics, electrical construction and maintenance, drafting, dental assisting, general business, machine tool operation, refrigeration mechanics.

Orange County Community College: television repair.

Sullivan County Community College: air and water pollution control, drafting, medical lab assisting, office assistant-stenographer, surveying.

Tompkins-Cortland Community College: construction technology, human services, mechanical technology, licensed practical nursing.

Ulster County Community College: business office skills technology, design drafting, drafting, merchandising, landscape development and maintenance (in planning).

Procedures

The following procedures were employed in the study:

A. A research team was recruited consisting of Frederick H. Stutz, Chief Investigator; B. Michael Closson, Research Associate; John C. Malotte and Donovan W. Russell, Research Assistants; and Janet C. Singer, Secretary.

B. A preliminary search of the literature on two-year colleges, on the seven colleges in the sample, and on State University of New York and New York State Education Department relations with two-year colleges was undertaken. Relevant sections of the New York State Plan for Administration of Occupational Education were studied.

C. Staff members made on-site visits to each of the seven colleges to meet with central administrative officers and others with special responsibilities to certificate and diploma programs. Efforts were made to

obtain a general orientation to each college and especially to certificate and diploma programs in each college setting. Institutional representatives were asked to informally appraise certificate and diploma programs as to their achievement of goals set for them. Published and non-published materials on the colleges and programs were obtained. Institutional representatives were asked to respond to preliminary questions and to supply certain sorts of specific information. The institutions were generous of time and information; these orientation visits were most helpful.

D. The staff prepared interview schedules based on purposes and research questions set forth in a previous section of this report. Samples of each interview schedule will be found in Appendix B, pp.142.

E. Staff members interviewed Lawrence E. Gray, Chief, Bureau of Two-Year College Programs, State Education Department; Paul C. Chakonas, Associate in Higher Occupational Education of that Bureau; and Robert M. Fraser, Assistant University Dean for Two-Year Colleges, State University of New York. Purposes of these interviews were to obtain a general orientation to SUNY and SED relations with two-year colleges and a specific idea of state planning and direction for occupational education in two-year colleges.

F. A letter was sent to a liaison staff member at each institution in the sample requesting specific information on admissions, course and program enrollments,

counseling and placement, instruction and curriculum, fiscal support levels, equipment and space, organization and other matters affecting certificate and diploma programs. A sample copy of this written request for precise information is attached as Appendix A, pp.140.

G. The study team visited each of the seven two-year colleges and conducted in-depth interviews, starting with Tompkins-Cortland Community College. Techniques and schedules were slightly revised as a result of the experience at that college. All members of the staff except the secretary interviewed on all seven campuses during either the preliminary or major campus visits. These same staff members also engaged in interviews with knowledgeable persons off campus but in the regions of the colleges. While one staff member concentrated in the area of central administration, finance and governance, another specialized in student and staff personnel services, a third looked especially at instruction and curriculum, while a fourth viewed college relations with the surrounding region. Interview schedules are attached as Appendix B, pp.142.

A listing of specific individuals interviewed will be found in Appendix C, pp.162. For each of the colleges, wherever it was feasible, interviews were held with program directors and instructors, presidents or other central administrative officers, finance officers, counseling, admissions and placement officers, chairmen of departments or divisions housing or related to certificate and diploma

programs, librarians, staff members from the arts and sciences, planning officers, trustees or council members, members of advisory committees to programs, BOCES and high school administrators and counselors, employers, representatives of agencies representing the poor and minority groups, and other appropriate persons.

Staff members were well received. Over 150 persons contributed time and talent to these interviews. Almost every person contacted evidenced willingness to be interviewed. The staff regrets its own inability to find the time necessary to contact other individuals. But the interview data provided major substance and direction for the study; it is used heavily in the sections on findings and recommendations.

H. Written materials were studied and analyzed, and are also utilized in sections on findings and recommendations. A list of major written sources appears in Appendix E, pp.178.

I. A questionnaire to students, seeking their views on certificate and diploma programs in which they were enrolled, was sent, with an accompanying letter, to 904 individuals. The number of replies used in analyzing questionnaire information is 359, a nearly 40% response, which the investigators consider quite adequate for their purposes. Copies of the questionnaire instrument, the accompanying letter, and a tabulation of responses are shown in Appendix D, pp.171. An interpretation of questionnaire responses is

given in section on views of students, pp.106.

J. Utilizing interviews, the literature and questionnaire responses, the investigators held a series of staff seminars and, on the basis of these discussions, wrote the report.

Limitations: The study is a limited one. It focuses on one sort of program in a total institutional setting; there is a risk of myopia and distortion in such an approach. It examines a selected sampling of only seven two-year colleges; findings and recommendations must be interpreted with this selected sampling in mind. The regional settings for each institution were studied only lightly, with interviews held with only a small number of persons off campus. The investigators do not know as much as they should about the regional relations of each institution. Finally, the study is limited by its own procedures--interviewing, questionnaire results and the limited number of written sources available give the investigators a less than complete picture of each of the colleges.

Strengths: The study has distinct strengths. Concentration on certificate and diploma programs met a specific need expressed in governmental planning and by two-year college officers. This narrow focus also made it possible for the staff to look quite carefully at one segment of the college's operations. On-site interviews resulted in obtaining a more realistic total picture of the institutions and their

programs than could have been ascertained in any other way. We feel fully competent, within the limitations expressed, to describe and interpret certificate and diploma programs at the seven institutions and to make certain general recommendations on the basis of these findings.

II THE COLLEGES

The seven colleges constituting the sample for this study are briefly discussed in this section. Only salient characteristics relevant to consideration of certificate/diploma programs are considered.

SUNY Agricultural and Technical College at Alfred

Located 75 miles south of Rochester in Allegany County, SUNY Agricultural and Technical College at Alfred is the oldest institution in this study, having been founded in 1908. At the present time the College enrolls approximately 3200 full-time students and employs 250 teaching faculty and professional staff members. The degrees of Associate in Applied Science, Associate in Science, and Associate in Arts are awarded by the College. The six academic divisions are: Agriculture, Arts and Science, Business, Engineering Technologies, Health Technologies, and the Vocational Division. A nine member council is the immediate governing board of the institution.

Sixteen miles to the southwest in the Genesee River village of Wellsville is located the College's Vocational Division which houses Alfred's certificate programs examined in this study. The 622 students and 37 faculty in this Division make it the largest certificate program population of any college in our study.

The Vocational Division was established in 1966 in order to fill a vacuum at Alfred in the training of skilled workers

and craftsmen. Starting with five two-year programs; Automotive Service, Building Construction, Drafting, Electrical Service, and Food Service, the College has subsequently established a one-year certificate program in Business Office Skills. There are 353 first year students and 269 second year students studying full-time in the various vocational programs.

Most of Alfred's certificate programs are of two years duration. The staff of the Vocational Division strongly advocates programs of this length because of their potential for comprehensiveness. A "learning to do by doing" philosophy dominates the curricula; e.g., actually building houses in the Building Construction program.

The second year students either specialize in a particular segment of a field or familiarize themselves in depth with various segments of an occupation. At the end of this time period few students encounter difficulties in translating their skills into jobs.

The setting in Wellsville appears to meet the Vocational Division's needs admirably. A good morale is evident on the campus and few students or staff express regret at not being closer to the main campus. This isolation obviously has some negative features; primarily difficulties in providing adequate student support services. Concern about the isolation has caused SUNY to question a permanent location on the Wellsville site. Nevertheless, an associate dean of students, a vocational coun-

selor, and a student activities director (based in a new student activities building) provide on-campus assistance to the student body. Many students also participate in some activities on the main campus. Vocational shops scattered around the village together with the students rooming throughout the area make the Vocational Division a community enterprise.

The Vocational Division programs are popular and serve a large section of New York State. All of the two-year programs have waiting lists and some run two shifts in order to accommodate more students. About 30% of the Vocational Division student body is from Allegany and its adjacent counties. Efforts are made to encourage applicants from the local region. Thirty per cent (30%) of the students are from the Buffalo area with the remainder from other sections of the state plus a handful from out-of-state. The student attrition rate for the 1971-72 winter quarter was 9%.

It does not appear that having a separate campus or two-year programs are pre-requisite conditions to operating successful certificate programs but, overall, the Wellsville operation is an unusual enterprise and worthy of study.

SUNY Agricultural and Technical College at Delhi

Established in 1913, this institution is one of six agricultural and technical colleges operated under the auspices of the State University of New York. It is located in the western Catskill Mountain region in the heart of rural

Delaware County. A local council of nine members directs the educational policies of the College.

Enrollment in the fall of 1971 stood at 2443 full-time students. This represents a ten-fold increase in size since 1955 (232 students) and signals the emergence of the College as a major educational institution. Delhi has seven instructional divisions: Agriculture; Business Management; Engineering Technologies; Hotel, Restaurant, and Food Services Management; Arts and Sciences; Continuing Education; and Vocational Education. The degrees of Associate in Applied Science, Associate in Science, and Associate in Arts are granted by the College in addition to certificates awarded for less than two-year programs. At present there are 135 full-time faculty in the institution.

One-half of the total student body are from within 100 miles of Delhi. However, in keeping with the state-wide orientation of agricultural and technical colleges, many of Delhi's students come from various parts of the state, including 30% from the New York metropolitan region and 6% from out-of-state.

The Vocational Education Division was established in 1968 and contains the certificate programs to which this study is directed. The Division is oriented toward training people for skilled and semi-skilled occupations. At present, it is made up of 319 students (276 men and 43 women), 18 instructors, and a director. Eleven departments within the Division are

presently offering a variety of programs: Drafting; Electricity; Institutional Grounds Keeper; Masonry; Licensed Practical Nursing; Plumbing, Heating and Pipe Fitting; Refrigeration and Air Conditioning; Welding; Automotive Mechanics; Business; and Carpentry. Programs are of one year's duration and most consist of two hours of theory and four hours of applied skills training per day. Some of the programs (e.g., Automotive Mechanics and Drafting) offer a second year option for students desiring more specialization.

Each department within the Division is assisted by an advisory committee of experts drawn from the surrounding region. Innovative instructional attempts, including the use of curriculum modules, are presently being undertaken. The majority of the programs are oversubscribed and must turn away applicants each year. There is an annual attrition rate of 12% for the Division.

The Vocational Education Division at Delhi is unique among the certificate programs covered by this study in that the great majority of its students live in college dormitories together with students in degree programs. This results in a high amount of personal interaction among the students in the various divisions. Overall, the faculty as well as the students of the Vocational Education Division appear to be well accepted by the campus community. Thus, Delhi proves that although situated in a separate division, certificate programs can be integrated into the total college environment.

Projections for the future include adding four programs to the Vocational Education Division and expanding its enrollment to 395 by 1975.

Hudson Valley Community College

Founded in 1953 with 88 students, Hudson Valley Community College has expanded to about 4,000 full-time students on a modern 125 acre campus in Troy. Sponsored by the Rensselaer County Legislature, the school serves the urban counties in the Albany area with 25% of its students from Rensselaer County, 40% from Albany County, and the remainder from the rest of the state, but largely from the capital district. The population of Albany and Rensselaer Counties is projected at 526,000 by the year 2000 from the 1970 figure of 439,000.

The area is heavily industrialized and the programs offered are geared accordingly. Begun as a technical institute, the school has maintained its emphasis on technical and practical education. In addition to numerous degree programs in the technologies, it offers seven certificate programs. Four of these are solely within the Certificate Division and are two years in length--Automotive Mechanics, Electrical Construction and Maintenance, Machinist and Machine Operator, and Refrigeration Mechanics. The other three programs are jointly run by the Certificate Division and the appropriate technical department. These three programs, each one

year in length, are Dental Assisting, Drafting, and General Business.

Total enrollment in the certificate programs is 525 or about one-eighth of the total student body.

The degree of support and visibility which these programs have varies. The Automotive Mechanics Program is well known, with a waiting list for admission being the norm. Other programs are less well known and hence have problems both on and off campus.

Additional occupational training is offered through the Urban Center which works with the unemployed and under-employed of the region. Administered by the College, the Urban Center offers short, non-degree programs with intensive career and personal guidance.

Hudson Valley Community College affords an interesting view of conditions under which certificate/diploma programs can be operated. Programs vary in degrees of status and effectiveness as judged on the campus. The mix of vocational and technical programs within the Certificate Division is promising despite certain rivalries across divisional lines. In an urban region the decision has been made to concentrate courses for the disadvantaged in a separate division. In an industrial area, promising steps in regional coordination of manpower development have been taken but much remains to be done. What the impact of adoption of the new A.O.S. degree on certificate programs will be is an intriguing question.

Orange County Community College

Opening in 1950 with 160 full-time students, Orange County Community College has since grown to over 2100 full-time and 3000 part-time students with most but not all served by the Middletown campus. The central campus is located on a 26 acre estate which includes modern buildings. Continuing Education uses other facilities in the County, most of which are in Newburgh and Goshen.

Serving Orange County over the next 25 years will require the College to deal with a rapidly changing county. An expected doubling of the population from 221,700 in 1970 to an estimated 435,000 by 1995 will see the County grow from its present small town, small industry orientation to becoming an extension of metropolitan New York.

The College is composed of five divisions: Biological and Health Sciences, Business Administration, Humanities, Physical Sciences, and Social and Behavioral Sciences. This year each division was limited to beginning one certificate program but only the Television Repair Program in Physical Sciences was created. Present enrollment in the program is 11. Anticipated enrollment for fall, 1972, is 16. The Television Repair Program operates as a separate entity with no academic interaction with the degree students. All teaching is done by one instructor. The only other division which had planned a certificate program was Business Administration,

though the enrollment potential for the specific program, Service Station Management, was too small for it to operate.

Excepting these two divisions, the school has a strong academic orientation with most of its practical course offerings concentrated in the non-degree Continuing Education Division. Credit obtained in these programs and in the Television Repair program may not be transferred to other programs at the College.

Orange County Community College is understandably proud of its academic strengths which are maintained in admissions, standards for instruction, emphasis on transfer, and the careful insulation of its one certificate/diploma program. But the College sits in a region where rapid economic and demographic changes are predicted. It will be instructive to observe whether the College can change, if necessary, in order to accommodate future needs of persons who seek job entry or upgrading via the certificate/diploma route.

Sullivan County Community College

Opening in temporary quarters in South Fallsburg in 1963 with a handfull of students and staff, Sullivan County Community College in 1972 enrolled 1073 full-time students in the fall term and 913 in the spring term, with part-time enrollments of 164 and 162 in the two terms. The College has a professional staff of 94 and is about ready to occupy a new campus a few miles from the present site.

Fields of study at Sullivan County Community College include Business, Civil Technology, Commercial Art, Hotel Technology, Arts and Sciences, Mental Health Assisting, Public Health Technology, Science Laboratory Technology, and Medical Laboratory Assisting.

A look at enrollment figures for the class of 1971 shows Sullivan County Community College to be somewhat unique among community colleges studied. Of the total new class of 683, only 215, or less than a third, are residents of Sullivan County. Nassau provided 149 entrants with 62 coming from Suffolk, 51 from Queens, 43 from Broome, and appreciable numbers from Westchester and Kings Counties.

The reasons are not hard to find. Sullivan County has a population of approximately 50,000 persons, graduates only 700 high school seniors annually and sends many of these on to four-year institutions. The College must seek students from other sources and especially from the metropolitan area.

The County's small population and ailing resort industry give the College both problems and opportunities. Recruiting must be state-wide, placement in Sullivan is difficult, and the economic base of local support is limited. Nonetheless, most interviewees agreed that the County welcomes the College as an economic asset in its own right and, more importantly, as a means of attracting and helping to develop a more diversified economy. Though population and economic growth have

been modest, Sullivan may soon be impacted by the outward thrust of the metropolitan region.

Administrators indicate that the liberal arts at Sullivan will not become predominant (about 400 out of the 1000 students are in liberal arts studies), with continued emphasis to be given to vocational programs and to the economic and educational development of the region. In order to attract students from a state-wide base and to give impetus to county and regional development, it is necessary to hold a talented faculty and to feature innovative curricular and instructional modes. The 1970-71 presidential report reflects these emphases.

Given the announced missions of the College, the stressed need for economic development of the region and the technical-vocational emphasis of the total curriculum, it is somewhat surprising to find how limited the diploma programs are in size and scope. It is estimated that the Office Assistant-Stenographer program will have 9 graduates in June of 1972. Four persons are expected to complete the Drafting diploma program. Six persons will complete Surveying and 22 persons are expected to earn diplomas in Medical Laboratory Assisting. The largest graduate group, 29, is expected in Air and Water Pollution Control. Programs are normally one year in length.

Diploma programs are parts of divisions offering degree work; they are thus supported by larger units, and students in diploma programs may have options to transfer on into degree programs. Indeed, in some cases, the so-called "upside down"

curriculum is designed to have all students in a field of study do "hands on" work in the first year with options to enter employment or to go on for a somewhat more theoretical second year. College staff members seem to think well of this plan. Unusually careful attempts are being made to relate College diploma work to the needs of the poor and to "feeder" programs at the regional BOCES.

Like Tompkins-Cortland Community College, Sullivan is worth watching in the area of diploma programs. Some programs are innovative and apparently successful; nonetheless, programs of this sort face an uphill fight given the regional mileu and national demands for degrees. As it moves to a new campus, Sullivan County Community College may be at a crossroads in deciding how much stress to place on job-entry non-degree programs.

Tompkins-Cortland Community College

Youngest of the seven colleges surveyed, Tompkins-Cortland Community College opened its doors in 1968 to a full-time enrollment of 202 students in temporary quarters at Groton. The 1972 full-time enrollment is 876, the full-time professional staff numbers 54, and part-time enrollment in the spring semester (1972) is 703. The College estimates its 1975 full-time student population at 2043. Confirmed plans for a new campus at Dryden, a central location in the two counties, are completed.

Programs of study include Business Technologies, Engineering Technologies, Health Technologies, General Studies, and the university parallel program in liberal arts and sciences.

The population of Cortland and Tompkins Counties combined is estimated to be 135,400 by 1975. Tioga, Schuyler, and Cayuga Counties send appreciable numbers of workers into Tompkins County, and can also be considered as part of the normal admissions base for the College. Chenango, Chemung, and Seneca Counties are also within the region affected by the College. Economically, this region is dominated by education, being the location for Cornell University, Ithaca College, the SUNY College at Cortland, Wells and Elmira Colleges, and the Corning Community College as well as Tompkins-Cortland Community College. Employment in the two counties is heavily in the service industries of which education is the chief. Small manufacturing and retail trade follow as fairly substantial sources of employment. The region is neither distinctively urban nor industrial; population and economic growth predictions show steady but not dramatic growth.

In its certificate programs, the College appears to recognize regional characteristics. There are very few of these courses and these are offered through the Continuing Education Division, thus encouraging enrollments of employed

and older persons. Most certificate programs are part of degree program complexes. Programs in Human Services, Licensed Practical Nursing, and Secretarial Studies (not yet underway) serve areas of employment stable to the region. There are modest certificate programs as parts of degree programs in Mechanical and Construction Technologies, recent in origin, and aimed at employment entry levels in drafting, design, and architectural design. Total 1972 spring semester enrollments in all certificate programs is 75. These students are largely residents of Tompkins and Cortland Counties.

TC3 administrators believe that the College should serve the needs of people in the region as these are demonstrated. Thus, they support development of certificate programs as these meet regional needs. It is argued that certificate and other types of occupational education offerings will be most feasible if certain state restrictions can be lifted and if the College is able to develop modular scheduling and programming and various forms of individualized instruction. At present, it is in continuing education that work of a certificate nature fluorishes; a substantial proportion of daytime students are in degree programs and targeted for transfer to four-year institutions. This is not a surprising situation in view of the regional context of the College.

The observer comes away with the view that TC3 is worth watching in the area of certificate programs. These face an

uphill fight for growth but are sufficiently innovative in management, community relations, and instruction to deserve attention. Two of the programs, the established Licensed Practical Nursing and the struggling but interesting Human Services, are especially interesting.

Ulster County Community College

Ulster County Community College, sponsored by the County of Ulster, is located on a 140 acre campus in Stone Ridge, Town of Marbletown. The College was established in 1961 and has developed steadily so that it now has a full-time enrollment of 1280 and a regular staff of 115.

The College began at a temporary location in Kingston. In 1967 a new campus was completed in a rural setting a few miles to the west of that city.

Ulster County is comparatively large, 1140 square miles in area. It extends 40 miles in a north-south direction, paralleling the Hudson River, and having an east-west dimension of 45 miles at the widest point. The County had a 1970 population of 140,000 and is estimated to grow rapidly to a 1985 figure of 2000,000. Much of the population is and will continue to be located near the Hudson River Valley in urban and suburban Saugerties, Kingston, and New Paltz.

While the County is projected to increase in population substantially in the next few years, so too is the Community

College. A SUNY study estimates a 1975 enrollment figure of 2600 students.

Most of the students at the College are presently enrolled in two-year degree programs, with only ten certificate program students as of the spring of 1972. These were in Merchandising, Business Office Skills (specializing in commerical typing, legal typing, and medical typing), Design Drafting, and Drafting. The College has not been able to attract the numbers of students it requires to maintain these programs, and some of them are facing elimination. The programs are administered by degree program divisions.

Ulster County has traditionally had a relatively large percentage of high school graduates go on to college. With the rising costs of higher education away from home, a growing number of young people are making use of the Community College. Most of the student body are residents of the County. People of the area seem rightfully proud of a school which offers good quality academic education. However, the area's developing industrial characteristics indicate a need for a comprehensive group of certificate offerings also. While the County ranks high in agricultural output, industrial expansion has stimulated population growth in recent years. The area's key position between New York City and Albany-Schenectady-Troy industrial centers has stimulated industrial development. Thus, the future of practically oriented certificate programs of study is very

important to the County and to the employment future of its young people. It will be instructive to view Ulster's responses to changing needs.

Observations

Certain characteristics of the institutions in the sample should be mentioned. First, the two agricultural and technical colleges have to be seen as in some ways quite distinct from the community colleges. Older and with successive waves of experience in vocational and career education, Alfred and Delhi have a tradition of preparing people directly for the world of work. Their newly developed vocational divisions are matched in size only by Hudson Valley among the community colleges studied.

Alfred and Delhi, like all the "ag and techs", are integral units of the State University system without a direct link to a local government, and have a council rather than a board of trustees as an institutional governing unit. Though each serves heavily the region in which it is located, acting thus like a community college, both seek and draw students from a wide area of New York. Public support comes to Alfred and Delhi from SUNY only. The only other major source of revenue is from student tuition. These two colleges are able to charge a lower tuition for certificate/diploma programs than for other programs.

The five community colleges have local sponsors (counties) as well as being linked to SUNY. They are designed as local or regional institutions even though some of them draw students heavily from other localities. Newer in origin, they have had to create certificate/diploma programs at the

same time as a variety of other offerings were established--not an easy task. Their immediate units of governance are boards of trustees who in turn work with county legislatures and SUNY. Operating budgets are financed approximatley by a one-third appropriation from SUNY, one-third from the local sponsor, and one-third from student tuition. Students from out of the county bring with them a contribution from their counties of residence. Current funding formulas are up in the air; our informants were not sure about the proportionate funding ratios for the near future.

Each of the seven colleges has certain unique features as the preceding profiles show. Each is located in a region with certain significant and distinctive characteristics. In attitude toward certificate/diploma programs their historic actions suggest the full range from disinterest at Orange through ambivalence at TC3 to cautious acceptance at Sullivan to thorough commitment at Alfred and Delhi. In terms of critical mass, only Alfred, Delhi and Hudson Valley have achieved the numbers and variations in programs to make our study fully worthwhile. But Sullivan and TC3 have certain programs and offer a future potential which make them useful to the sample. Ulster and Orange, too, have a potential, and have had some experience, and they are located in two regions where much change is predicted.

Except for Hudson Valley, the colleges lie outside the metropolitan portions of the state. In the time spent on

campus, the investigators felt a certain insulation from the central problems and pressures of the age. Even Hudson Valley sits on a high hill physically aloof from the urban sprawl of the Troy-Albany environs. But in point of fact, the apparently isolated colleges draw students from cities and populous suburbs. The others differ from Hudson Valley chiefly in that the latter works directly with inner-city populations through its Urban Center.

We cannot be blind to the fact of institutional and regional differences, nor to significant differences between the "ag and techs" and community colleges. Ideally, each program in each institution in its region should be considered as a case study. But given the time and resources at our disposal, we choose to consider findings and recommendations in the context of all the programs and institutions, however different one from the other. It is our belief that both findings and recommendations are sufficiently universal to be useful to two-year colleges generally.

III FINDINGS

Administration and Organization

Administrative Leadership

The success of certificate and diploma programs depends in large part on administrative leadership. Central administration can make or break programs of this sort. The presidents and their executive cabinets can, through staff recruiting, control of the planning process, relations with governmental units, and allocation of funds, order the priorities of their institutions. Moreover, they can set a style for institutions which militates in favor of or is prejudicial to career education vis-à-vis transfer programs. Though state regulations, faculty attitudes, student actions, trustee and other governmental positions, and societal views on college education all influence the status of certificate and diploma programs in two-year colleges, central administration on each campus is highly influential.

A number of administrators interviewed spoke warmly of the values of certificate or diploma programs. They see these as meeting regional economic needs, as raising and broadening the range of employment opportunities for young people, as providing training and upgrading in occupations for area residents, and as motivating many who would not otherwise seek a college education. Some view these programs as leading into degree work and, in some instances, into transfer to four-year institutions.

One respondent suggested that there will always be a need for collegiate programs of this sort as successive waves of such programs are upgraded to meet higher societal standards.

While administrators did not specifically oppose certificate/diploma programs, several pointed out difficulties of either a general or specific sort. There seems to be little demand for such programs in certain regions either among youth or older persons. Given the upwardly mobile nature of the society, most young people and their parents seek degree programs with secondary schools supporting such choices. For many on-the-job workers, non-credit evening courses seem to make more sense than the longer and often day-based certificate programs. Some administrators argued that incoming students deserve to have as many options open to them as possible with a full chance to start degree programs and plan transfer.

It was pointed out that certificate/diploma programs (especially of the one year type) lack status and are therefore not politically viable as colleges seek financial and political support for them. Advocacy of such programs in these regions could lead to difficulties in getting local funding and general support for all programs. Some respondents argued that state mandates concerning full-time enrollment and calendar serve as obstacles to development of shop-based "hands on" courses.

Most of the top administrators believed that certificate/diploma programs on their campuses were dealt with equitably in terms of administrative and fiscal supports in comparison with other types of programs. On three campuses, executives stressed plans to modify calendars and modes of instruction in ways which would benefit certificate/diploma and other career programs. Others argued that all programs received equitable and impartial treatment. Several persons remarked that vocational programs enjoyed conditions of equity even though they were relatively expensive to operate. On one campus the point was made that special library and counseling services were assigned to the vocational division.

In the interviews, however, equitable treatment for on-going certificate/diploma programs vis-à-vis others was stressed. Some respondents noted that in planning and development, with limited funds, new degree programs would win out over the non-degree ones. On two of the campuses in particular, the almost negligible amount of certificate/diploma work suggests that this has in fact happened. Several interviewees stated that to gain full institutional support it was necessary for certificate programs to be lodged within the more powerful and prestigious degree granting technologies.

It is worth noting that 33% of the students polled in the study did not believe that their certificate/diploma programs were considered by administration as being as important as other programs. Thus many students polled

view this matter differently from administrators interviewed on the subject.

In point of fact, public two-year colleges in New York State operate under explicit mandates to offer career programs leading to job entry and career development opportunities. Certificate/diploma work is one of the principal ways in which these mandates can be met. As previously cited, most top administrators on the seven campuses visited support certificate/diploma programs, albeit with a number of qualifications. Similar support was voiced by trustees, staff members in the arts and sciences, and key persons in the regions as well as by staff members closer to programs of this nature.

There are indications, however, that administrative leadership for certificate/diploma programs is not sufficiently vigorous on some of the campuses. The thrust for transfer programs and for degree work tends to relegate certificate programs to a subordinate role. This becomes evident in interviewing, in reading institutional literature, in viewing admissions and recruiting procedures, in studying student responses, and in examining institutional standards which are designed often to support traditional degree efforts. Even more important, perhaps, is a sort of implicit climate of opinion on some campuses which labels short-term, practical, certificate-awarding programs as nice but rather inconsequential. At colleges where central administrators behave as

though they considered such programs to be important components of their institutions, one senses how this is translated into institutional attitudes, policies, and procedures which result in strong and innovative certificate/diploma programs.

We urge top administrators in two-year colleges to exercise the power they have in developing appropriate certificate/diploma programs. Such leadership must take the form of an institutional image denoting these programs as fully worthy associates of programs leading to degrees. Such leadership must take the form of adopting institutional procedures and policies which will enable certificate/diploma programs to flourish--generous open admissions policies, thorough-going regional studies of employment opportunities and economic change and growth, skillful recruiting, adoption of faculty personnel policies designed to strengthen instruction, encouragement of appropriately diverse instructional and evaluative modes for such programs, and careful follow-up studies of graduates.

It is not difficult to discourage certificate/diploma programs. You can employ campus-wide admissions policies and procedures which discourage the very persons one might expect to attract to such programs. You can offer little financial support. You can ignore or "bury" such programs in catalogs and annual reports. You can publicly expect little growth in your official long range projections. You can be less than fully knowledgeable about the economy and

employment projections of the region. You can encourage journeymen instructors to become academics. You can ration the number of certificate programs by setting divisional quotas. You can assign responsibility to state government. Or you can write off such programs as not reflecting the upwardly mobile nature of the American society.

Organization

Certificate/diploma programs seem more likely to succeed if their critical mass (numbers of students, staff, physical spaces, etc.) is comparable to that of other programs on a campus or if such programs are smaller in numbers and spaces but are integral and respected parts of divisions or departments offering degree work also. It seems to take a sufficient aggregation of people and things to provide the base for high morale, instructional vitality, institutional and off-campus visability and political power. Small and somewhat isolated certificate/diploma programs usually lead a precarious life. There are relatively few such programs at the colleges visited in this study.

Lodging a small certificate program in a larger division will not in itself insure success. The program must have a certain internal coherence within the division, being able to share in the sequence of instruction, in staffing and in facilities. Moreover, it is important that students in the division be able to move in and out of the certificate program

without prejudice. If the certificate program is one year in duration it is important that it result in performance levels sufficient for successful job entry and also for movement into a second year of study with opportunity to earn a degree. At present, this latter event is unusual. Both options, work and further study, should be available fully to qualified persons.

It can be tentatively argued that institutions offering certificate/diploma work should plan for sufficient critical mass to allow for operation of a separate division. This does not mean, however, that relations of certificate programs with parent technologies need to be either remote or difficult. An autonomous certificate division can ally its faculty and students as well as its curriculum to the work of degree granting divisions in a number of meaningful ways. The investigators did not pursue these relationships very fully but have an impression that separate certificate or vocational divisions do not fully exploit ways of allying themselves to parent technologies.

Whether certificate/diploma programs be housed in a separate division or embedded in a number of degree granting divisions, there should be a single administrative officer with over-all responsibility for such programs. This seems essential if the special needs of staff and students in such programs are to be taken into account and if certificate work on a campus is to have enough political clout to get along. It would be helpful if this administrator came

from a background in career education.

In summary, we would urge colleges to either undertake certificate/diploma programs with sufficient critical mass to be housed in separate divisions, or to make such programs integral and respected parts of degree granting divisions. Which ever option is used, a single administrative officer should have over-all responsibility for all certificate/diploma work on campus. Which ever option is used, every effort should be made to ally certificate work closely with parent technologies and to create conditions in which students can move easily from one type of program to another and staff can share in teaching both certificate and degree classes. Core courses common to both tracks can serve the interests of both efficiency and integration.

Effects of Regional Settings

Any discussion of administrative leadership and institutional organization for certificate/diploma programs must take account of regional differences. Each college must recognize distinctive needs and trends in its region. All the administrative talent and organizational adjustment available will not prop up programs for which there is no legitimate need or for which the institutional setting is absolutely inappropriate. To try to graft onto a rural setting programs designed for the urban poor may create damage to both the clients served and the college itself.

To try to force career and occupational studies on an institution which has committed itself to being a preparatory school for four-year institutions may be to abuse both career and transfer programs.

We sense, however, that among the seven colleges studied there are wide variations in the willingness and capacity to transcend regional limitations. The agricultural and technical colleges, bound by geography and history to a rural tradition, have moved rapidly to also serve the employment and economic needs of an urban and suburban society. One or two community colleges in rural or small city locales are beginning serious efforts to assist minorities and the poor in gaining their objectives. On the other hand, certain of the colleges appear to have accepted regional restrictions too readily and appear not to have exerted sufficient leadership to transcend these limitations. Two colleges have almost no offerings in the skilled trades on a certificate basis despite the fact that their regions are as prone to have job openings in these trades as are other institutions where offerings are sufficient.

In interviews, respondents showed considerable knowledge about the purposes and development of their institutions in the context of the regions in which the colleges are set. Most acknowledged the need to meet legitimate and articulated regional needs and to relate closely to other institutions of the region. Some affirmed the importance of a coordination of regional educational resources.

Despite the general support for close regional ties and for meeting regional needs, the investigators discovered relatively little thorough work relating college to a region as both move forward. Planning and development in a regional sense is more honored in conversation than in fact. There are conspicuous exceptions to this situation; some institutions have thorough-going planning studies and are organized well for development; some colleges are beginning to make good follow-up studies of career graduates. Formal institutional planning, of the limited sort required by SUNY is, of course, being done. But one doubts that on some of the campuses there is enough hard data to justify making decisions about regional needs and opportunities in the years ahead or to justify decisions about whether certificate/diploma work will succeed or not succeed.

College administration should be realistic about what and how many certificate/diploma programs are to be offered, and should not be persuaded or forced into programs which fit neither regional setting nor institutional character. But this realism should be accompanied by the leadership necessary to satisfy fully those regional needs which are evident. Because on some campuses there does not seem to be sufficient data or planning organization to determine present and future manpower development needs, administrators are urged to strengthen institutional research and development units. It is fully realistic, as we see it,

to know what sorts of programs not to offer, to know what unsatisfied regional needs can be met, to lead a region in understanding what it needs, and to have the data to plan practically for the future. Among the colleges we visited, some are in regions about to undergo dramatic changes--we hope that these institutions will be somewhat ahead of these changes. Where individual collegiate resources and local sponsors cannot undertake necessary research and development, we ask the units of state government to assist. (state responsibilities are dealt with on pp.100.)

Budgeting and Finance

Current State University of New York procedures and regulations for financial planning, budgeting, and cost accounting are based on a functional rather than a separate program or mission breakdown. Hence, the institutions studied tend to use largely functional breakdowns in working with state government, local sponsors, and trustees. To a large extent they use broad function breakdowns, i.e., instruction or salaries or plant maintenance or personnel services, rather than specifying the comparative costs of different sorts of programs or of identifying such specific programs or missions as certificate/diploma work. This means that it is difficult on each campus to identify instructional costs per program, and thus to allocate funds to programs, or develop new programs on that sort of

knowledge base. To some degree, financial officers are working in the dark. Many of them deplore this situation and hope to see SUNY move to a mission or program type of budgeting. Certain of the financial officers have moved farther than others in setting up program-based fiscal accounting for internal use; one of the colleges will report to SUNY using this base.

There is an assumption on the part of most fiscal officers that the certificate and degree programs leading to careers are more expensive per instructional unit than are comparable programs leading to transfer; high staff to student ratios, sophisticated materials, costly equipment, and consistently small enrollments are cited as among the reasons for this assumption. This study has not gone into the matter sufficiently to make any judgment. Moreover, institutional accounting schemes make it difficult for anyone to know for sure. But it is worth emphasizing that if certificate programs are deemed to be expensive, they are vulnerable in times of economic stringency.

Current procedures in cost accounting, as in institutional reporting, generally place stress on full-time enrollment and full-time load factors. This sort of reckoning has a tendency to encourage instruction to be locked in to traditional collegiate patterns and to inhibit experimentation with advanced standing, modular scheduling, individualizing of instruction, and graduation on a performance standards

basis--thus the very sorts of innovations which certificate/diploma programs need are discouraged by accounting schemes that calculate numbers of bodies in fixed settings for fixed periods of time. (This subject will be considered more fully in the section on instruction, pp.75 , and on state responsibilities, pp.100.)

For reviewing current certificate/diploma program costs and efficiency of operation and in planning for new programs of this sort, SUNY, local sponsors, and the institutions should adopt schemes of accounting and reporting which identify and cost out individual programs or missions. Program or mission reporting would probably benefit all collegiate financial planning ventures; certificate programs need to be identified and studied separately since they are assumed to be comparatively expensive.

In considering certificate/diploma and other types of career programs, fiscal accounting and planning should employ systems which will encourage rather than discourage individualization of instruction and instructional innovation.

Staff Personnel Policies and Procedures

Central administrators interviewed were in general agreement that the staff instructing in certificate/diploma programs were competent and that, within certain limitations, they were treated equitably in comparison with other faculty members. One institution reported no problem for non-degree staff members on a campus where others held degrees.

An administrator on another campus saw certificate/diploma faculty as indistinguishable from staff members in the technology degree programs. On some campuses, of course, faculty members teach in both types of programs. At one college the certificate faculty is largely employed by the continuing education director and separate from the full-time staff. One college has its certificate work on a separate campus and views this situation as conducive to autonomy and equity for that portion of the faculty.

Few respondents, however, were unqualified in judging certificate faculty as on a par with other colleagues or as having no distinct problems. One president found some insecurity among the journeymen members of the staff due to their different backgrounds and goals. Some difficulties were reported in trying to work out academic titles for certificate staff. On one campus it appeared that part-time certificate staff were paid at lower rates than were full-time persons. At three colleges it was suggested that moves to new campuses with separation of divisional staffs had led or might lead to a growing schism between career and transfer faculties with certificate people affected. There were occasional references to a certain subtle but observable snobbery on the part of some arts and sciences faculty members toward occupational or career studies (we encountered none of this in interviews with several faculty members in the liberal arts and technologies).

Interviews with both administrators and faculty members and a review of college policies and procedures leads the investigators to support the view that administration and faculty associations both work for equity for all staff members including those in certificate programs. There is also evidence to show that certificate/diploma instructors and administrators occupy full and respected roles on their campuses. Generally, there are no important obstacles in the way of individuals who come out of industry and the crafts and technologies to live in an academic community.

There are, however, certain personnel policies and procedures which need to be reformed if these faculty members are to be fully effective and to feel fully equal. Given the somewhat fragile position of certificate work on some of the campuses, these personnel policy reforms would significantly help the quality of instruction and the vitality of the programs.

Criteria for rank, title, and salary should recognize those types of expertise necessary for effective performance in one's field. For instructors in vocational and craft-type programs the expertise needed is gained in industrial or shop experience and in continuous development in the specialized field. For these individuals rank, title, and salary ought to be determined by the expertise they bring from past experience and the degree of success in keeping up-to-date. In the long run the realism and vitality of their

courses, the ability to help students to achieve performance standards, will depend on how expert staff members are and continue to be.

There are some instances in which certificate/diploma teachers are judged on formal college studies more than on field experience, and are encouraged or asked to take college courses and work for degrees. Occasionally we encountered the view that these men needed courses in education to become proficient in teaching. At one institution certificate faculty hold an academic title different from that of other staff. On at least one campus these certificate instructors held normal academic titles but were conspicuously low in rank as a group.

It is doubtful that a journeyman will become a good teacher because he takes education courses; and there is no reason why in-service workshops in teaching-learning procedures cannot be used to better advantage. For that matter, successful teachers might be asked to informally help newer colleagues. It is doubtful that pursuit of a college degree, no matter how commendable as a personal goal, will strengthen one as a journeyman teacher. In fact, these practices may lead instructors away from their fields of expertise, force them to get out of touch, or to use the pungent phrase of one administrator, "corrupt them with ivory towerism".

Certainly in some of the higher technologies associated with health services, engineering, and business, formal academic qualifications make good sense. But even here a premium should be placed on staying on top of one's field of expertise.

More and more, faculty pay and working conditions are determined in the negotiations of faculty associations or their committees with administrators, trustees, and county legislators. It becomes the responsibility of these several parties to set personnel policy which will encourage indivd-uality and specialized expertise and will avoid a sort of academic or union lockstep in which differences are discouraged. We expect that certificate instructors, especially in the crafts, need to be fully recognized as skilled journeymen teachers with special study needs, special teaching assignments, and special ways of gaining promotion, tenure, and higher salary. But this approach should characterize personnel policy for an entire institution. (For consideration of the state role here see section on state responsibilities, pp.100.)

We recommend to administrators, faculty associations, trustees, and county legislators that faculty in certificate/ diploma programs be treated with equity and as full citizens of the academic community. We also recommend that personnel policies be so drawn that they encourage this certificate faculty to stay abreast of their fields of expertise and to

be rewarded in rank and salary for so doing. We further recommend that administrators and faculty associations accord to certificate staff members opportunities to innovate without penalty, to have small classes, to use performance standards and modified calendars, to determine optimum contact hours in their fields; in short, to meet the conditions of their trades and vocations. But we would not deny the same degree of individual treatment to those in any other academic unit.

The Associate in Occupational Studies Degree

The Board of Regents has authorized a new two-year degree, the Associate in Occupational Studies, for use in occupational education programs requiring two years of study for completion and a high school or equivalency diploma for admission. One of the seven colleges studied has asked for authorization to use this degree. Because certificate/diploma programs would be chiefly affected by the new degree possibility, this subject was discussed with staff of each institution.

Top administrators and certificate staff members are divided in their views about the value of using this degree. Some take the position that it should be used if it will help students to gain both prestige and better jobs. Others argue that a degree will be especially helpful for those programs which are concerned with preparation for business and the health services where degrees are a long

accepted credential. Another argument for the use of the A.O.S. is that it would help to create a state-wide standard for occupational programs at the two-year college level which would benefit employers, students, and the institutions.

A number of reservations were expressed about the use of the A.O.S. Some respondents rejected it as a bow to the "credentialism" which is, in their view, too prevalent in the society. One respondent pointed out that if certificate programs were extended in length, raised in level of instruction, and made more difficult to enter, the inevitable result would be creation of a new series of one-year certificate/diploma programs to take the place of the old ones. Most reservations centered on the threat degrees would pose to the practical, job preparation nature of present certificate work. They contended that one-year, shop-centered programs leading to specific jobs are extremely valuable in themselves.

Examining the A.O.S. degree proposal in the context of certificate/diploma work at the colleges studied, the investigators view its potential effects on such work as largely adverse--a position which we found to be supported by a number of staff members on the campuses.

If certificate/diploma programs are lengthened, if course requirements are standardized, and if admissions requires a high school or equivalency degree, some of the strengths in present programs may be lost. Occupational

programs will be closed to large numbers of adults for whom a high school or equivalency diploma is an obstacle they will not or cannot overcome; the colleges will be admitting for credit programs even fewer than the now inadequate numbers of older workers, homemakers, the poor, and minorities. Fields of study which can be adequately completed in a year will be somewhat artificially inflated to two years in the interests of competition. The promising movement toward individualization based on performance standards may be weakened by prescribed requirements. Having the A.O.S. might discourage careful review and reform of certificate/diploma programs--the respectability of the degree could possibly serve to hide defects. More importantly, there is a threat that the practical and realistic nature of present programs would be lost in a scramble to achieve academic respectability.

The standard arguments for having A.O.S. degree programs have merit of course. Most important, such a move may give students more options and higher aspirations, may serve them in long-range career development. But the assets are outweighed by the potential liabilities. We would argue for retention of certificate/diploma programs even if an A.O.S. degree option is offered.

Two-year colleges should use the A.O.S. degree only where it fits well the special needs of occupational fields and never as a substitute for certificate/diploma programs.

There should always be one-year programs with a "hands on" emphasis, admitting openly from all ranks of society, and encouraging individual progress based on performance standards. In any case where the A.O.S. would seriously weaken the chance to have vital programs of this nature, it should be rejected.

Planning and Decision Making

How is planning done when decisions must be made about inception, modification or termination of certificate/diploma programs? How are decisions made and by whom? What sorts of institutional and regional studies provide a knowledge base for planning and decision making? What is the role of state agencies? These were questions on which this study was based.

Each of the colleges studied appears to have an orderly process of planning and decision making preceeding submission of new program proposals to SUNY and, in some cases, to the State Education Department. New certificate/diploma program proposals normally are initiated by individual faculty members, department or division chairmen, or division or department faculties; an occasional new program is suggested by a state agency, the experience of another institution, a trustee, or an economic or vocational group in the region. Obviously, on-campus initiation of new program proposals, the most common basis for origin, is heavily influenced by experience at other colleges, national trends, contacts with

employers and unions, and the literature. When the larger certificate (vocational) divisions were set up a few years ago, a somewhat more formal process was employed.

Our investigators discussed the criteria for new program proposals with a number of staff members. Examination was made of proposals submitted for state approval as well as "regional needs studies" on which such proposals were based. Again, we found these criteria to be quite well developed in themselves and based on orderly studies of regional needs and job opportunities. While the thoroughness of the needs studies and the proposals varied considerably from program to program, it is apparent that state requirements or suggestions as well as college regulations combine to create certain minimal standards in studying regional needs, outlining proposals and providing justifications. We can cite proposals which are far above minima in amount of study and quality of documentation and could serve as models.

Proposals for new certificate/diploma programs go through a similarly ordered path of decision making on the several campuses. After divisional work is done and approval voted, usually in informal contact with central administration, a proposed new program must be reviewed by a faculty curriculum group, sometimes by the entire faculty, and usually by an administrative council as well. Students sometimes sit on one or another of the review bodies. Approvals of programs are not automatic; numerous cases of requests for modification

or additional documentation were cited--some proposals fail to win campus approval.

New program proposals must win approval of trustees or councils and, on the cost side, of county sponsors. They then pass through a prescribed series of steps in winning approval by SUNY. If accreditation is an issue the State Education Department is involved. As best we can determine, the SUNY decision making process for these programs is largely pro forma, not automatic of course, but based on proper procedures rather than value judgments. The hard decisions are assumed to have been made by the institutions. This is a tentative judgment, made without serious study of the SUNY decision making process.

Institutions vary in the degree to which they involve advisory committees in the planning and decision making process. Sometimes a knowledgeable group in the region is used intensively from the beginning; some of its members then become the advisory committee. In other instances, we found the advisory committee came into being only after the program was approved or had been started. (See pp.87 for a discussion of the role of advisory committees.)

Modifications of program content and emphasis are usually made by program staffs on the basis of experience, drawing on faculty colleagues and administrators as appropriate for advice and consent. The process is informal, it does take place, and a number of individuals indicated that review and modifica-

tion of programs were on-going. We should point out that many of the programs viewed are so new that only now are program modifications being seriously considered. It is important to note that 68% of the students responding to the questionnaire answered affirmatively to the question, "Do you have the chance to suggest ways in which the program can be improved?"

Decisions to terminate programs appear to be made by certificate/diploma staff and associated divisional colleagues in conjunction with central administration. Low enrollment seems to be the chief reason for a decision to terminate. If a program fails to recruit or if its attrition rate is very high, the program will be seriously considered for termination.

There is a certain ad hoc quality to the planning process which gets certificate/diploma programs and indeed institutions into difficulty. Often planning and decision making is made in a somewhat parochial context and without much attention to total institutional or regional needs; this situation was commented on by a number of individuals on the campuses. In a sense, this is the result of a lack of institutional research and development organization--a lack which really encourages ad hoc or "let's give it a try" decision making. It can be accurately stated, we believe, that an enthusiastic faculty member can, if he tries hard enough and long enough, work a certificate proposal through to establishment as a program. While this is undoubtedly a good thing in some ways, and while it is done within an orderly framework of institutional

and state decision making steps, it can result in operation of a program which fails to fit very well into total institutional or regional goals and needs. It is a part of the fine art of administration, we suspect, to moderate wisely the often conflicting claims of individual aspirations and institutional needs.

The somewhat ad hoc nature of the process acts in another way to militate against the interests of certificate/diploma programs. On a campus where there is an implicit bias against such programs, and where initiation of programs is left to individuals or divisions, few programs come into being since few staff members care to run the gauntlet of difficulties even though an orderly process is prescribed. In such settings, a carefully constructed campus-wide planning and development process would establish the ground rules and make it more evident whether certificate programs were possible, were desirable, and would gain support.

Certificate/diploma program planning and decision making (to establish, seriously modify, or terminate) should be made on a thorough knowledge base, as part of an institution-wide planning and development process, and with both regional and national trends and needs in view. Both SUNY and the State Education Department as well as other state agencies should provide full resources and leadership to the colleges in this endeavor. While every effort should be made to encourage faculty members and divisions to initiate new program

ideas, approval of programs should result from a thorough systems approach involving all appropriate parties and information.

Communicating with the Public

While the seven colleges studied vary considerably in both types and quality of communications concerning certificate/diploma programs, our staff found that in general such communications were less than adequate by accepted modern standards. We recommend to institutions desiring to develop programs of this sort that they study carefully the markets for students and employment, address these markets in forceful and attractive ways, and listen to a variety of people in the region, especially graduates of the programs.

Most of the institutions describe briefly certificate/diploma programs in the general bulletins or catalogs. But in these publications, programs of this type are usually buried in a wealth of information and program descriptions and are, usually, discussed in a somewhat routine and pedantic way associated with academic publications. It is difficult to see how such publications can bring to life a "hands on" program designed for prospective students who are inclined toward the practical and lively.

Some colleges issue special bulletins for groups of certificate/diploma programs, and many of the campuses issue specialized flyers for individual efforts. Although these vary a

good deal in content and style, they can be generally characterized as not especially lively or attractive and, in some cases, not fully informative.

Some of the private junior colleges of the country issue informational bulletins and flyers which are better written, more attractive and, sometimes, more informative than are those produced by the seven colleges in this study. It would seem feasible for public colleges to adapt the communications skills used by the private schools and yet operate within the constraints imposed by their public nature.

Just as colleges need to inform and interest potential students, so they need to make employers acquainted with programs and qualifications of graduates. They also need to tell the story of certificate/diploma programs to legislators and citizens. And they need to set up as many ways as feasible in which interested parties can feed ideas and information back to the campuses to use in modifying and strengthening programs. We found a number of informal techniques employed to do these things. But few of the campuses seem to be well organized to carry on two-way communcations about career programs; staff and students and advisory committee members do this work in an on-going way, but without much institutional planning and support.

Conspicuous examples of successful practice come to view. One college uses radio with special effectiveness. One new program is engaging in face-to-face contacts with large numbers

of high school students. Another program uses its advisory committee as a regional communications system. But much remains to be done.

When asked, "How did you first hear about the program you are now in?", 44% of the students responding replied "from a high school counselor or teacher". This to us suggests a market for the right sort of communications about certificate programs--high school and BOCES counselors and instructors and the students they serve.

Student Personnel Services

Admissions

In regard to student admission into certificate programs, all colleges follow the state-mandated "open admissions" policy to some degree. However, a number of programs have added criteria for admission. Most of the certificate programs included in our study require that students be high school graduates or hold a high school equivalency diploma either prior to admission or before being issued a college certificate. Many also require a recommendation from an educator who has had contact with the applicant. Tests, either SUNY-sponsored or others, are also required prior to admission to a few certificate programs.

None of these added criteria are required by the state for admission into one or two-year certificate or diploma programs (State Education Commissioner's Regulation 103.3). Thus, the widespread use of high school graduation or equivalency as a criterion either for admission or graduation from these programs acts as an obvious deterrent to high school drop-outs. This represents an exclusion of an entire segment of our population, many of whom could especially benefit from such programs.

The fact that these admissions criteria exist indicates a desire on the part of some college officers and staff members for more control over the type of student being admitted

into their certificate programs. Our study indicates that there are increasing internal pressures on some of the campuses for more stringent admissions requirements. Primarily the pressures come from faculty teaching in certificate programs which have a highly technical orientation. Their feeling is that without certain basic skills students can not succeed in intensive programs. For example, proponents of this view cite one program with 87 applicants which accepted the first 22 students who applied and had 15 of them drop out during the academic year. They argue that such a state of affairs wastes time, money and talent.

Others with whom we discussed the matter support the basic concept of open admissions and are concerned lest initial attempts to weed out inappropriate students lead to some of the programs serving only advantaged groups. This could be particularly a problem when the selection criteria do not necessarily reflect the abilities requisite to succeed in certificate programs, as in the case of the high school equivalency requirement.

In general, we think that the trend toward admission criteria in certificate programs is a dangerous one. The original motivation for establishing certificate programs was the desire to increase the opportunities for occupational education among those wishing to become skilled workers. Such work generally does not require rigorous conventional academic preparation, as is reflected by the curricula of most certificate

programs. Academic screening devices of the type presently in use do not appear to be generally appropriate to this kind of program and in fact violate the spirit of open admissions. Colleges with high attrition rates in programs would be well advised to closely examine their opportunities for instructional individualization before erecting entry barriers. In the few cases where specific talents are obviously required we recognize the need for admissions criteria but only after careful analysis of each situation.

For these reasons, we recommend that the concept of open admissions should be adhered to in certificate programs, except in unusual cases, with applicants being admitted on a first-come, first-served basis. If this recommendation is followed we recognize that some problems will increase as students having a wider variety of backgrounds (but not necessarily greater differences in ability since these are already great) are admitted into the certificate programs. The subsequent discussions on counseling and remedial assistance (pp. 65) and instruction (pp. 75) will speak to ways in which the needs of a diverse student body may be met.

Admissions problems in certificate programs are not limited to constraints placed upon the applicants. Many potential students never become aware of the existence of the programs. Although programs recruit to varying degrees (generally depending upon their success in meeting enrollment projections), this recruitment is almost entirely limited to high school

seniors. Our study indicates that more than half (52%) of the students in the certificate programs first heard about their program through high school and BOCES teachers and counselors. Hence, programs desirous of attracting more students would do well to develop closer ties with secondary school representatives. It is important that high school representatives know the nature of these programs and the employment opportunities available to their graduates. A few programs effectively use brochures and separate catalogs in this regard. Others include faculty members on the recruitment teams which visit schools in their regions.

Even more significantly, we encountered few recruitment attempts directed toward diversifying the student population in certificate programs. Representatives of minority groups, the rural poor, veterans, older adults and non-high school graduates are in very short supply in most certificate programs. Good reasons can be cited which inhibit members of these various groups from applying to certificate programs (e.g., some minority group members are not interested in blue collar jobs). Nevertheless, we feel that more can be done to attract members of all of these groups. One of the community colleges in the study has developed close ties with a local anti-poverty agency and has thus been able to attract a number of low income people to its certificate programs. This approach is worthy of emulation. The recruitment of older adults, especially high school drop-outs is another difficult problem.

Mass media advertising campaigns appear to be one effective manner of recruiting these students. Contact with the Veterans Administration would be useful in recruiting veterans. Also helpful would be making the programs themselves more attractive to older students. One example of this, advocated in the section dealing with instruction, is the use of modular scheduling systems which permit students to attend college for short time periods (three to six weeks) or on a part-time basis while still maintaining economic stability. Another example is the adoption of advanced standing procedures as advocated in the following section.

There are no easy answers to the question of how to encourage student diversity but if certificate programs are to meet the need for occupational education and upward mobility among the general population, an objective they are well suited to by virtue of their training for skilled crafts and trades, they must expand recruitment procedures to include more than recent high school graduates.

Another problem area in certificate program admissions procedures is the general lack of clearly defined opportunities for advanced placement and advanced standing. Few of the programs which we studied encourage advanced placement or have uniform procedures for accomplishing this. Seventy-three per cent (73%) of the student sample responded that they did not have the opportunity to "skip those parts of the program in which you had already mastered the skills and information."

In most cases, students enter programs at the lowest level and only those exhibiting great personal initiative as well as appropriate skills achieve advanced placement.

We recognize that advanced placement is facilitated by a critical mass of students and staff, a group large enough to permit curricular and instructional flexibility. But the most important factor appears to be the openness of the instructional staff to experimenting with truly individualized instruction. A first step in this direction could be for each program to develop performance-based objectives pertaining to the successful completion of each course or unit of instruction. Once these objectives are identified, and they already are in many cases, tests could be developed to measure progress toward them. These tests could then serve the triple role of determining advanced standing for incoming students, adapting curricula to student levels, and measuring student progress within the program.

Advanced standing is an option in a number of the colleges studied but is infrequently utilized. Students come to the programs with varying degrees of expertise and it would be very desirable to recognize their proficiencies through curricular exemptions as much as possible. This would be especially attractive to older adult applicants who would undoubtedly be unwilling to spend time studying material in which they were already proficient. This approach would probably make the

programs even more attractive to BOCES students who presently make up approximately 12% of the overall certificate program enrollment.

Therefore, we recommend that colleges should formalize advanced placement and advanced standing opportunities within the certificate programs by developing performance-based objectives which will identify the skill levels basic to successful completion of segments of the program as well as measure the achievement of incoming students in these skill areas. (See pp. 76 for a related discussion of instructional modules.)

Related to increased opportunities for advanced placement and advanced standing is the practice of rolling admissions. One of the colleges in the sample is experimenting with this procedure. Students are admitted into programs at the time that openings arise rather than only at the start of a new semester or academic year. This approach augments the flexibility of advanced standing by enabling a college to sustain high student enrollments throughout the academic year. Hence, rolling admissions should be considered in conjuntion with procedures which increase the flexibility of instruction.

Counseling

In the context of the certificate programs, guidance and counseling has a number of ties to the admissions process. Even in the present situation of quasi open admissions, students with a wide variety of abilities enter certificate

programs. Because of this diversity it is imperative that the staff of certificate programs ascertain the characteristics of the students they will be teaching and counseling. Some of the colleges studied appear to achieve this end by administering a battery of tests to entering students. Since this is not uniformly true, we recommend that each college should carefully examine its testing procedures used with incoming students and make efforts to develop a battery of diagnostic tests which will provide information about the affective, cognitive and vocational needs of students. Included in such a battery could be vocational performance tests to rate students on their potential for advanced placement.

A testing program can also be helpful in terms of academic support of entering students. Diagnostic tests can facilitate the assignment of students to "study skills" courses. Most colleges have remedial programs but often they serve the needs of certificate students poorly. A frequent comment on the student questionnaire was that there were not enough opportunities for certificate students to engage in remedial work. This problem is likely to increase if student bodies become more diversified.

Even when remedial opportunities are available we found that the certificate students tended to drop out of them primarily because of the extra time required. Other students abandoned these programs because they were unable to relate to the content of the reading programs. In order to overcome

these problems colleges should not only provide certificate program students with appropriately tailored remedial courses, but also insure that student schedules are designed in ways which will make time available for these courses.

The situation in regard to personal counseling of certificate program students tends to be paradoxical in some of the colleges included in our study. By this we mean that counseling centers tend to be geared toward degree program students with faculty members taking a secondary role; whereas instructors appear to be heavily engaged in the counseling of certificate program students with the counseling centers playing a minimal role. This state of affairs is reflected in the results of the student survey which shows 49% of the students pointing to instructors as being helpful with personal problems while only 11% indicate counselors have been helpful in this regard.

We subscribe to the ideal of student and teacher establishing a full relationship in which there is potential to treat personal as well as academic problems. But this type of relationship assumes that the teacher has some personal expertise in advising as well as back-up support when the problems are complex.

In the context of our study it was impossible to assess the competence of certificate program instructors in dealing with the personal problems of students. It would probably be fair to assume that there is a full range of this competence

on most faculties. Whatever the case, it is apparent that they engage in a good deal of counseling, especially vocational, and frequently are the only adults in the college doing so with these students. Because of this, we recommend that each college should develop in-service training workshops to enhance the counseling abilities of the instructional staff members working with students in certificate programs. If possible, these should be led by experienced members of the college counseling center.

There is also a general problem regarding the back-up counseling available for students in certificate programs. On the campuses for which we have data these students have the lowest rate of referral to counseling centers of any group of students. This correlates with the fact that only 11% say that they turn to counselors with their personal problems. As well as having close ties with their faculty, other reasons why certificate students do not frequent the counseling center appear to be the lack of information, among both students and their instructors, regarding counseling services and on occasion the unwillingness of instructors to refer students to centers which in most cases lack counselors trained to work with vocationally oriented students.

This leads us to recommend that colleges should acquire the services of a counselor experienced in working with vocationally oriented students. Such an individual would not

pre-empt the valuable on-the-spot service provided by instructors but rather offer skilled back-up support when necessary.

Counseling centers in the colleges studied also appear to be weak in meeting the needs of special groups of students, especially minority group students. This is not a significant problem at present on any of the campuses studied due to their relatively homogeneous student bodies. It could become one if the state-mandated open admissions policy results in active recruitment of diverse types of students.

Although faculty in certificate programs appear to have a significant impact upon many of the students, this occurs in an understandably haphazard manner. Some of the colleges in an attempt to make student-faculty contact more periodic have assigned a faculty advisor to each student. We feel that this is an excellent idea since it attempts to insure that each student has meaningful contact with at least one faculty member. Services provided by a faculty advisor can include initial personal orientation to the certificate program, general academic advising and counseling during the course of the year, informing students of guidance and counseling opportunities available on campus (including placement), and when appropriate, refering students to other individuals and agencies. Hence, we recommend that each college consider adopting a faculty advisor system.

In our study of the counseling procedures at the various colleges we have found a dearth of research and reports in

this area. This vacuum is detrimental to the self-assessment of the college counseling centers. There is need not only for statistics on the types of counseling performed, student profiles, etc., but also for follow-up surveys in order to help determine the strengths and weaknesses of the counseling and academic programs.

Students who have dropped out of certificate programs especially deserve to be queried. One of the colleges in the sample not only performs an exit interview but contacts each student 30 days after leaving in order to ascertain his or her perceptions of the program and reasons for termination. Attrition studies will be most helpful if the reasons for student departure are determined and related to program operation.

Therefore, we recommend that each college counseling center should initiate self studies and student surveys geared to determining the effectiveness of the various programs in meeting student needs.

Placement

In general we found the job placement of students graduating from certificate programs highly variable albeit successful. Primarily students seem to acquire jobs through personal connections and the contacts of their instructors. It is apparent that the instructional staff make a significant impact upon student placement through their contacts and trade associations. Many students are aware of this since 35%

indicated on the questionnaire that they would turn to their instructors "for help in finding a job".

Overall, students in certificate programs do not have great difficulty in finding employment. On the questionnaire only 21% indicated that they anticipated "serious problems" in getting a job. In certain of the technical programs (e.g., Licensed Practical Nursing) some of the students have a number of job offers from which to choose. The programs in which students have difficulty acquiring jobs appear to be both those in which they receive a limited training in marketable skills and others affected by the current economic decline (e.g., drafting).

On most of the campuses visited the placement office was only peripherally involved in assisting certificate program students obtain employment. In a number of cases students were not even aware of the existence of a college placement office. On the other hand, on one campus having a placement office actively involved with placing certificate program students, 45% of the students sampled indicated that they would turn to it in their quest for employment. Furthermore, at that particular school only 13% of the students indicated that they felt they would have difficulty in acquiring a job.

Placement operations appear to work effectively when directed toward students in certificate programs. Thus we think placement could profitably be formalized at most of the colleges in this study. Although the present informal place-

ment system appears to be working in most cases, the increased use of more formal procedures would have long run benefits. As in the case of counseling, the involvement of instructors in the placement process serves a valuable adjunct role but does not satisfy the need for professional service. If done systematically through a placement office which includes a counselor well versed in vocational employment opportunities, students will most likely be offered more options, especially geographical, than they are at present. Furthermore, there would be added assurance of the effective handling of three primary placement functions: career counseling (assisting students in determining personally appropriate employment fields and informing them about the types of employment in those fields), facilitation of employer-student contacts (contacting prospective employers via letters, brochures and personal visits; advertising in trade journals; arranging recruitment visits to campus, arranging meetings between recruiters and faculty members; scheduling interviews between recruiters and interested students), and student preparation in job-hunting techniques (assisting in résumé preparation and coaching in successful interview procedures).

For these reasons we recommend that each college should include in its placement office staff at least one counselor experienced in vocational job placement who will orchestrate the job placement of students in certificate programs as a prime responsibility.

Another duty of a vocational placement counselor would be in conjunction with the recommendation in the instruction section concerning the need for increased student opportunities for cooperative work experiences. An experienced placement counselor would be a valuable force in the development of such a program. Participating firms would have to be recruited and then oriented regarding the skill level of students. Interaction between the firms and faculty members would have to be facilitated. This function would complement the other duties of a placement officer since it would serve to introduce students to employers and employers to the certificate programs at the college.

In the colleges studied we found a number of reports dealing with the placement function. These were primarily statistical in nature, and often included detailed documentation of employer contacts. A few colleges have also carried out follow-up studies concerning the employment situation of recent graduates. These studies focus upon the salary of the graduate, his satisfaction with his position, the opportunities for advancement, the adequacy of the graduate's preparation for the position, and his recommendations as to how the college program could be improved in light of his subsequent work experience.

Such an approach is helpful. We think that the colleges' placement programs could also benefit from attempts to assess their impact upon students who are going through or have recently gone through job searches. It would seem that the

attitude of these students toward the placement assistance offered by the college and their comments regarding its improvement would be very helpful in improving formal placement operations. Therefore, we recommend that each college should not only compile statistical documentation of the degree to which they assist certificate program students in job placement, but also survey students in order to get feedback on an annual basis concerning how the college can improve its functioning in admissions, counseling, instruction and placement.

Instruction

An Overview

Findings here are based on interviews with a number of central administrators, thirty-eight instructors some of whom were also department or division chairman, the questionnaire responses of 359 students, and a review of written materials.

Top administrators gave a somewhat mixed reading of instruction in diploma/certificate programs. Some stressed the up-to-date and realistic nature of these programs, citing ways in which instructors kept abreast of their fields through reading and summer work. Several extolled programs of this sort as serving regional needs well. It was pointed out that instruction in the programs must be good since graduates found jobs easily and reported success in their fields of work. Certificate instructors were cited by some as being unusually innovative in both curriculum and types of teaching.

Problems in instruction were also cited. Several respondents worried about a possible lack of substance in the subject matter of certificate/diploma programs. One or two administrators suspected the instruction as being too practical, especially in one-year programs, with a possible lack of instruction in the theory underpinning successful practice. A number commented on difficulties in reading and mathematics encountered in the programs, a situation which they felt was not remedied by the time students were graduated.

The programs are listed by title and institution. (see pp. 4 & 28). The reader is referred to these and to the paragraphs following for some consideration of program similarities and differences. The variety of programs makes it difficult to generalize about or make recommendations concerning curriculum, standards of performance and achievement, or quality of instruction. Instead, we choose to deal with instruction, considering its overall nature across programs and campuses.

It is useful to consider certificate/diploma programs as falling into three types, based on positions to be held by graduates--programs for technicians, programs for craftsmen, programs for office and service personnel. Most programs involve instruction and learning in both laboratory or shop and classroom. Generally, these programs appear to provide for more individualized instruction and more "over the shoulder" supervision than would be found in the higher technologies or liberal arts, with a correspondingly lighter use of mass classroom techniques.

An Instructional Model

Using interview information, written materials and examination of experimental and innovative programs, we suggest the following model for instruction in most certificate/diploma programs.

A. Open Admissions: Wherever possible, admission should be granted to any individual over 18 years of age who gives reasonable evidence of serious interest in a program.

For certain programs based on state, professional or business association standards, essential additional criteria for entrance would be applied. These should be at an absolute minimum.

B. Diagnostic Testing: After about two to three weeks of instruction (to give both students and instructors a chance to get acquainted without preconceptions as to ability and motivation), diagnostic testing would be used to determine levels of reading and mathematical competency and vocational-technical performance. Testing would include both pencil and paper (reading, mathematics, etc.) and "hands on" performance.

C. Performance Based Advancement: Each student would proceed at a pace determined by himself, instructors, and diagnostic and subsequent performance testing. This process would be implemented by use of:

1. Remedial modules of instruction to be developed for students needing these as evidenced by performance on diagnostic tests. The emphasis here would be on catching up, with grading being at a minimum. Remedial work might be in academics or practical performance but should be an integral part of the program, easily included in a student's schedule. The college's development or compensatory studies office might handle the academics.

2. Developmental modules of instruction to include a series of modules linked in a developmental sequence and leading one by one to mastery of performance skills and

meeting predetermined performance standards. Each module would be quite self-contained, including evaluative techniques to enable student and instructor to determine when it is satisfactorily completed. Each student would proceed at his own pace, being encouraged to repeat modules if necessary, having an opportunity to skip modules when he did not need these, and working with instructors in an individualized way. There would be as many group class sessions as were deemed necessary. Grading would be used but linked to performance standards and determined by both instructors and students.

3. Advanced placement would enable students to have the opportunity to move directly into modules of study and instruction at their levels as determined by written and practical tests.

4. Advanced standing would allow students assigned to advanced placement to receive credit for work exempted by the fact of advanced placement. They would need only to complete modules beyond the level of advanced standing.

5. Flexible graduation would supplement moving at an individual pace in meeting predetermined performance standards. The student would be graduated when such standards were met. Thus, his time in the program could vary from a quarter to several quarters depending on his prior training and experience and performance in the program.

D. Supplementary Changes: This instructional model would probably work most effectively if it were set in a

college-wide scheme encouraging individualization and flexibility for students. Though certificate/diploma programs could operate alone with a flexible calendar and with a number of options for students, they would prosper more if these were institutional norms. The following procedures are suggested:

1. A new college calendar would enhance the adoption of this instructional model. Such a calendar would have a "rolling" admissions policy with students coming into day-time programs in a manner at least as flexible as is the case in continuing education programs. Students would arrive and leave throughout the year, entering modules suited to their level of proficiency and departing upon completion of these. The calendar would encourage establishment of programs of various lengths. Neither a one-quarter program geared to developing a specific skill nor a two-year program in the humanities would be denigrated because of its length. If such a degree of flexibility is impossible for the entire institution, it is recommended for use in certificate/diploma programs.

2. Flexibility of student movement is an important component of this instructional model. Certificate/diploma students should be encouraged by institutional policy to move across program lines within their own fields and to take electives in other fields. Modular programming and scheduling should help to make such movement more feasible.

It seems quite likely that students moving relatively rapidly through certificate programs will elect to transfer to more advanced fields of study on their own campuses or to take desired electives during a post-program year.

College policies should also encourage students in degree programs to move into the certificate/diploma fields for study. Again, modules of a reasonably self-contained sort attached in a developmental sequence should serve this purpose well. Even more important, the colleges should be attracting into day-time programs numbers of adults whose conditions of life make study during days desirable. Such adults are much more likely to be in programs with individualization of instruction and modular programming. These adults are conspicuously absent now from present day-time programs on the seven campuses visited.

The students polled have given us some clues to present practice on the campuses in respect to flexibility. Sixty percent (60%) felt that they could proceed at their own pace in certificate/diploma programs while 31% believed that they could not do so with the rest not being sure. This may suggest that certificate programs are already adjusting to individual pace, a fact attested to by many staff members, but that more needs to be done.

When students were asked, "Have you been able to skip those parts of the (certificate/diploma) program in which you have already mastered the skills and information?", only 19% answered "yes" with 73% responding "no" and the rest "not sure".

Neither advanced standing nor advanced placement appear to be working very effectively in the view of a large majority of students.

Cooperative Work Experience

Flexibility has an additional advantage in that it might permit more students than now have the opportunity to get on-the-job experience in conjunction with college programs. Presumably a modular schedule could include modules of work in industry, business and the crafts off campus. Cooperative work experience has the advantage of familarizing students with the reality of the world of work in ways no shop or laboratory oriented course can match. In a well organized program students can be confronted with both the depth and breadth of working environments. Furthermore, valuable attitudes as well as skills can be acquired from experienced craftsmen and technicians in real life situations. Awareness of the expectations and personal qualities required to succeed on the job will assist students in developing a realistic approach to their studies. Fringe benefits of such a program include the personal contacts made by students in the job market and the familarization of participating firms with the certificate and diploma programs. Some employers have expressed enthusiasm for this type of program and they would be likely ones with whom to initiate pilot projects.

Staff

The backgrounds appropriate for the certificate staff will vary according to types of programs. Academic preparation may be appropriate for instructors in the laboratory sciences and in some office technologies. The crafts require staff members with a much more work-based background. Ability to relate to the students is required of all certificate teachers, and this ability is based on a knowledge of situations facing students both at school and on the job. Certificate/diploma teachers normally serve a broader role than most, being closely involved in counseling, placement and even in recruiting. While the counseling role should be adjunct to that of the regular student personnel services, it is generally understood that vocational students are somewhat reluctant to use these services and will often call upon the instructors with whom they work so intimately and for such long periods of time.

Nearly all certificate faculty members with whom we spoke stressed the importance of up-to-date experience in their fields of work. Nearly all regarded counseling, placement and recruiting as legitimate parts of their professional responsibilities. Forty-four percent (44%) of the students polled said that instructors had been helpful with personal problems and 35% indicated that they planned to turn to instructors for help in placement.

On question 12, students were asked, "In your opinion, how up-to-date in their fields are the instructors in your program?".

Students from the campuses where certificate instructors are urged to gain academic credentials responded as follows:

Very up-to-date	55%
Sufficiently up-to-date	41
Not sufficiently up-to-date	4

Students from campuses where instructors are urged to stay up-to-date by gaining additional craft or industry experience responded in this way:

Very up-to-date	76%
Sufficiently up-to-date	23
Not sufficiently up-to-date	1

While student responses are heavily of the view that instructors are up-to-date in both settings, it is worth noting that industry and craft oriented instructors rate significantly higher in the "very up-to-date" category. Most of the programs are new and the instructors rather recently experienced in crafts or technologies in both cases. One can speculate, however, that instructors led away from their fields of expertise by academic requirements may become out-of-date rather quickly. The rather low turnover among certificate staff suggests that both types of teachers, the up-to-date and the obsolescent, will be around for some time.

Equipment

Just as it is important that instructors in practical programs keep up-to-date in their fields or work so that students

may be up-to-date, so also it is important that equipment be modern and in good condition. As far as possible students need to learn on the equipment they will be using or repairing in the world of work. Though this seems obvious, and is attested to by many of those interviewed, the point needs to be made. Most programs studied are no more than four to five years old; equipment, most of it purchased with Vocational Education Act funding, is reasonably modern and usable. But conditions will change.

As the need for new equipment presents itself, expenses may have to be carried by the colleges in capital equipment budget allocations. Other sources are surplus government equipment, gifts from industry and business, or further special government funding. Though financial officers believe that this problem can be met within the limits of institutional budgeting, many instructors do not, and current budgets for capital equipment seem to be rather modest to meet any heavy demands.

To explore other sources of funding, including the time consuming search for government surplus and gifts from industry, each college with a sizable investment in technical and certificate programs should have an officer designated to work on this problem. He might or might not be the campus officer responsible for all certificate programs.

Support of Reform

The investigators are not naive enough to see their recommended changes as panaceas, nor are they unaware of the

practical obstacles. Let us consider certificate/diploma instructional reforms in the setting of the institutions and the state.

As long as financial support is based on full-time enrollment there is an incentive to set requirements which will hold students on campuses for prescribed periods of time and will place some premium on getting them enrolled even though later attrition is heavy. The prospect of a "rolling" enrollment is threatening financially to say nothing of the sort of minor nightmare it could cause in the offices of fiscal officers and registrars. Needed is state policy accompanied by local willingness to break away from full-time enrollment criteria for fiscal accounting and to reward institutions and programs for their innovative and experimental modes of instruction as much as for the number of bodies enrolled. Perhaps the only true test for a certificate/diploma program is how well it prepares students for entry into the world of work and for career development.

And the flexibility of modular programming may not, after all, be so costly even under present accounting formulas. If a certificate program is viable and popular (and many of them are) it may sustain or increase enrollment in a flexible system. Moreover, evidence suggests that many students completing relatively short certificate courses elect to remain on campus, take electives, or move into a second year of advanced work.

The highly individualized mode of instruction described here is no panacea for all programs. It may not lend itself particularly well to the higher technologies or business subjects let alone to the more theoretical work in the social sciences and humanities. Obviously no single scheme should be adopted for all purposes. But the rapidly developing reforms in instruction via flexibility, modules and audio-tutorial and video-tutorial modes offer promise to almost all types of undergraduate courses. We would like to see the certificate/diploma programs as leaders in instructional reform on campuses--some of them are currently.

The need for an individual mode of work for a certificate instructor has been previously cited. If such instructors are to be engaged in the very flexible types of teaching suggested here, it is important that they be encouraged to develop load schedules and types of student contact which will fit their work. They should be encouraged in this and not held to arbitrary institution-wide standards. While we respect the need for faculty. associations to secure equitable and rewarding conditions of professional employment, we hope that such conditions will honor legitimate differences across program lines.

Whatever the problems and limitations, certificate/ diploma programs seem likely to have optimum vitality if they provide conditions necessary for each student to proceed at his own pace. We recommend all steps feasible for achievement of this goal.

Regional Relationships

Certificate/diploma programs are, more than most two-year college offerings, very closely tied to regional systems. These programs draw students more heavily than most from the immediate region, serve regional economic development needs, and send graduates into the local work force. Thus, the effectiveness of certificate/diploma programs depends quite heavily on how successfully they are set in the region.

We discussed the programs and institutions in their regional settings with a number of administrators and other staff members on campuses and with a number of advisory committee members, employers, high school counselors and instructors, BOCES representatives, anti-poverty officers, and college trustees. Findings and recommendations are based on these interviews and also on a review of printed materials. The scope of the study was sufficiently limited to make it impossible to interview large numbers of persons off-campus. This discussion will be organized around interviews with specific off-campus groups, supplemented by a background of information from campus interviews, the literature, and student questionnaire results.

Advisory Committee Members

Almost without exception, advisory committee (sometimes called council) members interviewed were complimentary of the

certificate/diploma programs with which they worked. They stressed that these programs attracted competent and well-motivated students, prepared them successfully for initial job entry, met recognized regional economic and educational needs, and provided a good basis for community support of the colleges. Many believed that certificate/diploma work should be expanded both in daytime and evening sessions. Expecting a bias in favor of career education from such a sample, we were, nonetheless, impressed by the high degree of support for existing programs.

Committee members saw present advisory committees as generally representative of community interests, a conclusion which we will challenge subsequently. Most respondents favored open admissions. They were divided on the question of whether or not certificate programs received equitable treatment vis-à-vis other college programs. Only half of those interviewed believed that their programs received a fair share of funds.

Respondents described the committees as largely functioning as group mechanisms and as advising chiefly on curriculum matters. Some reported regular meetings with an agenda drawing on their expertise. Others cited either frequent or infrequent meetings of a "pro forma" sort. A few expressed the view that they were used chiefly as "rubber stamps".

Advisory committees appear to be generally under-utilized. We found some college staff members who saw little use in

having advisory committees. This may have been because they did not use theirs efficiently or effectively.

We recommend careful selection of key persons to advisory committee membership at the earliest possible stage of program development, and serious utilization of members wherever this can be done without infringing on the responsibilities of program staff. We recommend the broadening of committees, where appropriate, to include union members, BOCES instructors, women, minority and poverty group representatives, and officers of large industries and corporations. Student representatives on advisory committees can introduce realism to discussions (see Section IV of this report) and should be utilized in a meaningful way.

In the initial stage of development the advisory committee can be used to: validate the program by advising on employment and demographic trends in the region, on specific job needs, on career development ladders, and on long-range projections for the field; help insure the acceptance of the program by communicating with vested interests in the community; and to assist the college in the planning of facilities and acquiring equipment.

Once a certificate program is in operation, the continuing functions and responsibilities of an advisory committee could include: reviewing curriculum to insure against its obsolescence; providing information relating to industrial changes and technological developments; developing guidelines for

hiring instructors; assisting in expanding placement opportunities for program graduates; teaching courses in the program when appropriate; and providing an open channel of communication between the college and the surrounding community.

In terms of the process of advisory committees, we urge that they meet regularly, perhaps three to four times per year, and that these meetings deal with substantive questions known to members in advance. Problems and objectives to be pursued by the committee should be identified early in the academic year. Then an agenda and work schedule can be developed to deal with them. One college attempts this through a series of workshops on campus involving staff, students, and employers.

In short, there are many valid and important functions that advisory committees can perform and we propose that they be used to the fullest extent consistent with program integrity.

Employers

The few employers interviewed were generally impressed with both the types and quality of certificate/diploma programs offered in their regions. They cited successful job performance of program graduates, the journeyman competence of instructors, and the good relations maintained by the program with area employers and personnel directors. Since the sample was selected for us by the colleges and represented employers with relatively close connections with the programs, we expected a bias in favor of career education on the

campuses. Nonetheless, the very supportive tone of these interviews is impressive.

Employers and others stressed the importance to the regional economy of having more programs to prepare persons for job entry and career development. They expressed concern about the growing numbers of liberal arts transfer students on the two-year college campuses, wondering if these students would be prepared for careers upon graduation.

Planning and development issues are considered earlier in the report (pp.51-). One of the key groups in any coordinated regional planning effort will be employers. If the small sample we interviewed is typical, employers will be anxious to take part and will become strong advocates of certificate/diploma program expansion. They are also interested in sponsoring on-the-job internships for students.

High School Representatives

High school counselors and instructors interviewed were in general agreement that certificate/diploma programs in two-year colleges are useful for students who are not "college material" or have not had a complete high school program, or for adults who need retraining. They did not view these programs as suitable post-secondary routes for successful high school graduates.

Looking at regional programs in terms of how they had helped students going into them from high school, most of the

high school representatives felt that the programs had helped students significantly and specifically had helped them to find jobs. Few of the counselors worked very closely with the colleges, nor had they had a part in setting up or reviewing certificate programs.

Several high school staff members expressed concern about a lack of coordination between BOCES offerings and college certificate programs, and urged a greater articulation of programs or a possible merger of these. A number of persons stressed the importance of having advanced standing opportunities in college for graduates of either high school or BOCES vocational courses.

Given the points of view and experiences cited here, it is not surprising that high school students have some difficulty in finding out about certificate/diploma programs and, if they are successful in high school, are often discouraged from entering such programs. We believe that a good deal could be done practically to build bridges between the high schools and the career programs at the colleges.

High school counselors and vocational instructors should be in close contact with the certificate/diploma programs. They should be encouraged to visit these, to talk with staff and students, to see these programs vis-à-vis other college curricula, and to have attractive and informative printed information about the programs in their offices. As spokesmen for students of secondary school age they should have a part

in decisions about new programs and some voice in planning such programs. They, college staff members and students, and BOCES representatives should be in close contact in these matters.

Leadership in relations with secondary schools needs to come from the college administrators and instructors. Such leadership has emerged on some campuses; at others it is significantly lacking. Where it is lacking, we can expect high school students to receive an uninformed and often less than enthusiastic reading on career education opportunities in the colleges.

Finally, we must ask the question, "Should a successful graduate of a broadly based high school be encouraged to enter a certificate/diploma program at a community college?". If he or she is seriously interested in such a program and on a basis of sufficient information, the answer is clearly "yes". It is up to the high schools and colleges to provide the information and to keep the doors open to all without prejudicing the options for successful hign school students.

BOCES Representatives

Interviews were held with a BOCES (Board of Cooperative Educational Services) officer in each of the seven college regions. Respondents were generally supportive of the idea of having two-year college career education programs, viewing these as helping both young people and the regional economy.

A number of criticisms and reservations about certificate programs were expressed. BOCES graduates, some respondents said, were as well prepared for the world of work as were their older counterpart graduates of the two-year college programs. All the college students with BOCES backgrounds had gained, they thought, was maturity. A number of BOCES spokesmen viewed the college programs as duplicating BOCES offerings, a situation which they regarded as threatening and wasteful of effort and funds. Several respondents were critical of the quality of certificate/diploma instruction, stating that it was not as realistic and thorough as was that found in BOCES courses.

Some of the BOCES send very few graduates on to the college programs. Several interviewees reported that relations between BOCES and the college programs are very sketchy. Many urged that articulation of the two types of programs be improved and advanced standing schemes be worked out.

We discovered relationships of a distinctly better quality than those cited above in two instances. One college and BOCES have a short but successful history of sharing physical facilities. In one region, BOCES officers and college staff members are closely involved in regional educational planning and in articulating intelligently BOCES-college programs in career fields. But these appear to be exceptions.

Again, as in relations with high schools, the colleges could initiate some common-sense practices to insure a better

articulation with BOCES. We advocate advanced standing and placement for qualified students (pp. 78-). We recommend utilization of BOCES personnel on college advisory committees. Also needed is an intensive look at developmental career or vocational programs from grade 10 through two-year college graduation, to see how these programs can be made optimally coherent and efficient for students. BOCES and the colleges need not be competitors; they can serve different clienteles and they can serve the same clientele on a developmental basis.

We suggest that in each region BOCES and appropriate college personnel, with the assistance of their governing units and of SUNY and SED, come together regularly to iron out differences, put together programs and share ideas. Such a venture will be in the interests of students, the economy of the region, and the taxpayer.

Representatives of Anti-Poverty Agencies

In interviewing representative officers of anti-poverty agencies in six of the seven college regions, we were struck with the fact that four reported no involvement in decision making about vocational programs at the colleges, while two reported only minor involvement. Only one respondent stated that low income families were using the college vocational non-degree programs to any extent. One representative reported virtually no contact with college administration and staff, three cited occasional contacts of an informal sort,

and one said contacts were frequent. There was general agreement that the colleges are providing important services for the regions, but that low income students are not being served by the colleges to any significant degree. (We would remind the reader that one college has an Urban Center, directed to the needs of low income groups.)

Respondents pointed out that many college staff members find it difficult to relate to low income persons and that programs offered are often not appropriate to such persons. It was noted that "first-come, first-served" enrollments are often filled up with middle-class students to the exclusion of the poor. Moreover, the poor can rarely afford to pay for such programs under present funding arrangements. Not only are there limited amounts of financial aid available on two-year college campuses, but some county social service departments remove persons from benefits when they attend college. Anti-poverty representatives also cited the failure of the colleges to actively build programs for poverty groups or to recruit into these and other programs.

We found one college region in particular where a local anti-poverty agency and the college were doing business together in an apparently successful way; there were problems, of course, but a serious effort was being made by the appropriate parties. We found other examples of colleges using financial aids and compensatory studies programs imaginatively to assist students from low income or otherwise disadvantaged back-

grounds. But these examples were the exception rather than the rule. There is need for the colleges, especially in their certificate/diploma and continuing education work, to plan and operate with the special needs of the poor and of minorities in mind.

Colleges should involve anti-poverty agencies and representatives more closely in certificate program planning and operation. Colleges need to develop techniques for ascertaining the educational needs of the poor, getting to them in recruiting for new programs, and finding sources of financial aid. Regions need to coordinate educational resources for the poor and other disadvantaged groups, pulling together the talents and opportunities present in the colleges, BOCES, manpower training agencies, OEO programs, and the like. There also needs to be special assistance for the non-English speaking groups.

College Trustees

Eight interviews were held with trustees or council members, representing six of the seven colleges in the study. Respondents were unanimously supportive of certificate/diploma programs, stressing their value for certain types of students and for the economic growth of their regions. In judging what should be the chief goals of the colleges, they agreed that educating people for jobs and offering comprehensive

programs were paramount in importance. Thus, all trustees seemed to support both career and transfer programs.

Several trustees expressed the view that certificate/diploma programs face problems caused by their lack of prestige in the community and indeed among some members of the college staff. One trustee in particular felt that college administrators were subtly working against such programs. It was pointed out by several trustees that regional high schools failed to give certificate programs equity in their college advising systems. Three trustees felt unequivocally that certificate programs on their campuses enjoyed conditions of equity with other offerings.

Noting that career programs are expensive to operate, most trustees insisted that the expense was worth it in terms of program outcomes. Six respondents agreed to a need for more programs of this sort.

Trustees do not, of course, exercise specific administrative functions in regard to certificate or any other sort of programs. Their's is a governance and general policy making role, and they approve and support certificate and other types of programs and services in this context. It is unrealistic, therefore, to expect of them specific service to certificate/diploma programs let alone advocacy of any one program. In point of fact, most of them, unless serving on the educational policy committee of their board or council, do not come into close contact with individual programs.

Nonetheless, it is significant that trustees interviewed agree on the importance of career education, and this agreement is registered by trustees from colleges with thriving certificate programs as well as those from institutions with meagre programs. Perhaps there is a role for trustees in preserving balance in the college curriculums and in assuring a proper place for career programs of a non-degree sort. We recommend such a role as the colleges join other agencies in planning and development on a regional basis.

Another comment seems in order here. Perhaps more than others, trustees can tie a college into its community. We suggest to trustees, generally, that some of the colleges are not tied in very effectively to the needs and interests of important groups in their regions, and that some campuses do not seem to know very much about the reactions of the public to their endeavors. We can cite the example of one college which is currently analyzing a questionnaire sent to a sample of its regional public in an effort to find out how the people feel about the college and its programs and services.

The Responsibility of State Government

Currently there appears to be little positive leadership exerted by SUNY's Two-Year College Division in matters affecting certificate/diploma programs. Central State University staff and bureaus do not seem to provide institutions with leadership in long range planning for such programs, in acquainting them with newer developments, in suggesting program developments or providing informational resources, in providing institutions with precise economic and demographic data, or in fully evaluating proposed programs. If such leadership is available, it is neither recognized nor taken advantage of by the colleges studied. Spokesmen at these colleges stressed the need for more SUNY leadership and help. They made it plain, however, that it is leadership, not domination, fixed direction or standardization which they seek.

Most of the college spokesmen view the State Education Department's Two-Year College Bureau as providing a degree of leadership and as being helpful in respect to certificate/diploma programs. They cite the degree of expertise in the Department in vocational and occupational education and give examples of how this is used to the benefit of campus programs in the career areas. The SED Bureau staff, albeit small, leads in informal ways through visits, interchange of ideas and practices, conferences, reviews of national trends, and so forth. Many respondents recognized the value of such

leadership, testified to its usefulness, and expressed the desire for increased activity of the sorts described.

The scores of other agencies of state government and interrelated federal agencies with competencies affecting programs of a certificate/diploma nature--manpower, labor, commerce, planning, economic development, anti-poverty, human relations, etc.--were not discussed or viewed in this study in any comprehensive way. But in general, our staff came away from the colleges feeling a need for an improved coordination of state, federal and regional services of government as these might strengthen certificate/diploma programs. We found at least one region where manpower development is being seriously studied on a regional basis. There are regions in which anti-poverty and minority group agencies work fruitfully with college staff in certificate type programs. There is a degree of give and take in the relations of SUNY and the State Education Department as they deal with approval of certificate/diploma programs--they work together efficiently in this endeavor. But a good deal remains to be done before state government works with community and other two-year colleges in a fully coordinated and optimally effective way. This issue itself would make an excellent subject for study; we regret lacking time and means to do it.

State University of New York and the New York State Education Department might work together to provide the

following types of leadership:

1. Sponsor, fund and release from regulatory norms pilot projects in certificate/diploma programs on individual campuses. Such pilot programs could be either suggested by state agencies or initiated by individual colleges. Instructional experimentation of the sorts discussed earlier lend themselves to piloting. These could include programs designed to prepare for emerging types of occupations, modular scheduling, audio-tutorial methods of study, on-the-job training, advanced placement, new schemes for utilizing equipment, special programs for the disadvantaged, new linkages between certificate/diploma studies and liberal arts, and many others. Such pilot projects would receive special funding and be freed from usual regulations as to admissions, curricular standards and degree requirements. The FTE formula would be largely ignored.

2. Coordinate state resources in planning and development to assist individual colleges in making decisions about new certificate/diploma programs, and lead in developing new sources of data needed to inform such decisions. There is a wealth of economic and demographic data available to state-wide agencies; individual colleges lack the funds and time to develop meaningful regional data on which to base new program decisions. This is the appropriate role of state government. Obviously, optimum local and regional inputs to planning and development should be sought.

3. Lead in the coordination of two-year college efforts in providing certificate/diploma programs. This study is one step in providing such leadership; its chief aim is to inform colleges of work going on at seven institutions. There is much more to be done. We found a surprising lack of information on individual campuses about the state of the art at other institutions within the state or about national developments. Though the agricultural and technical colleges have a tradition of moving in state or even national circles, some community colleges appear to be decidedly parochial in outlook. Only state agencies can provide the continuous stimulation and clearing-house for the free market of ideas and practices.

4. Assist and give leadership to the process of coordinating regional educational resources as these bear on the effectiveness of certificate/diploma programs. There is considerable evidence that BOCES vocational programs and college certificate programs are not as well articulated as they might be. Since BOCES operates under the auspices of the SED and boards of education and each community college operates under SUNY and local sponsors, this is as ideal place in which to undertake cooperative leadership to assure optimum articulation of programs and services. Who knows, over time, even physical facilities, instruction and personnel services might be shared efficiently! And, in truth, there are

conspicuous examples in place of effective sharing of students, instructors and physical spaces among BOCES and colleges.

Opportunities to lead in coordinating regional resources are not limited to vocational offerings in BOCES and colleges. Employers' associations, union locals, professional and public service organizations, units of local government, four-year colleges, manpower agencies, anti-poverty agencies, human rights organizations, high school counselors and administrators--these and a score of other groups affect and are affected by the vitality of two-year college certificate programs. While ideally each region should seek to coordinate its resources and in any event, should provide the inputs, there is an obvious need for the leadership of state agencies. And probably the local two-year public college, living as it does daily at the inter-face of local and state authorities, is the logical initiator of regional coordination. This college already has the advantage of doing regular business with both SUNY and the SED. (See pp.87- for a discussion of regional relations.)

5. Adopt regulatory policies which encourage individual colleges to experiment with certificate/diploma programs, to be flexible, to let individuals proceed at their own pace, to try new and bold programs, and to be rewarded for quality rather than enrollment or length of academic unit. (These matters are discussed at greater length in the section on instruction pp.75.)

Let us repeat. No college wants state domination or bureaucratically imposed rigidities in the interests of standardization. Nor do they want benign neglect. In the matter of certificate/diploma programs they seek leadership which at the same time would provide for regional autonomy in those areas of decision making which affect the integrity of the institution and the special needs of the region. State leadership can inform, encourage, offer resources, fund experimental work, and assist with coordination of regional resources.

IV VIEWS OF STUDENTS

Overview

Of the 1513 students on the seven campuses in certificate programs, 904 were sent questionnaires (due to the large enrollments at Alfred, Hudson Valley, and Delhi we took samples). Three hundred fifty-nine (359) responded in time to be included in our analysis, representing a response rate of about 40%. (A copy of the questionnaire, covering letter, and results may be found in Appendix ,

The validity of our questionnarie data must be examined. To do this, the following three questions are relevant:

1. Do the students know enough to answer intelligently?
2. Are their responses candid?
3. Is the sample representative?

For the questions asked, the students have reliable knowledge because these questions deal with their day-to-day affairs. Not only is their contact with these matters great, but their responses within programs are as consistent as one would expect. Furthermore, their written comments are knowledgable.

The openness of the responses exceeded the investigators' expectations, perhaps because much of our past questionnaire work had been with the four-year college student who is often innundated with questionnaires throughout his academic career. On questions where uncertainty would be expected, the students so indicated. While only 6% responded "don't know" when asked about whether their program received adequate

support (question 10), three or four times that number felt obligated to reply "don't know" to questions 7 and 8 which dealt with their knowledge of the attitudes of students, staff, and administrators.

We feel that the sample was representative. In age 47% of the respondents were 16-19, 37% were 20-23, and 16% were over 23. Seventy-six per cent (76%) were male and 24% were female, again typical of certificate programs as a whole. As to year in school, 74% were in their first year, 23% in their second, and 2% were in their third.

Responses by program ranged from 20% to 60% of those questioned, but in very few programs did fewer than 30% or more than 50% of the students reply.

The questionnaire is analyzed from the perspective of total student reponse, with breakdowns by program groups where these are noteworthy. However, the uniformity of responses across campuses and programs, especially on non-program matters, is high. Hence, little discussion of program differences is necessary.

The lack of differences in responses when grouped across campuses was surprising. Alfred and Delhi, the two agricultural and technical colleges, differed from the others in the types of programs offered rather than in student reaction to them.

The questionnaire responses are presented on a percentage basis. For questions which allowed multiple responses,

the total response necessarily exceeds 100%. The responses are discussed in categories rather than in the numerical order of the questionnaire.

Recruitment

Adequate recruiting for these programs is essential for their effective operation. Several questions involved this issue, dealing with how information about the program was obtained and how accurate it proved to be. Question 3 has direct bearing on this, asking:

"How did you first hear about the program you are now in?"

A.	High school counselor or teacher	44%
B.	BOCES counselor or teacher	8
C.	College admissions officer visiting your school	6
D.	A college instructor	6
E.	A visit to campus	12
F.	A friend or relative	25
G.	An employer	2
H.	Newspapers, tv, radio, etc.	3
I.	Other	10

Analysis of this response underscored the comparatively mall role taken directly by college personnel. While the igh school or BOCES counselors or teachers may be informing ıe students at the urging of the college admissions people,

such information is likely to have less than positive connotations considering the responses to question 5, which asked:

"Did your high school or BOCES encourage you to enroll in this program?"

A.	Yes	32%
B.	No	68

The lack of encouragement revealed by question 5, coupled with the negative attitude toward vocational, non-degree programs that was uncovered in some interviews with high school and BOCES personnel and college people in contact with them indicates that many students, if they ever hear of such programs, are given less than enthusiastic pictures of them.

Word-of-mouth, either from friends or relatives, plays a key role (25%) in recruitment, but much depends on second-hand information considering the inadequate publicity available for a number of programs. Only 3% of the students heard of their program via the media, a remarkably low number considering the willingness of newspapers and radio stations to provide free public interest announcements for the asking.

The frequency with which students first heard of their program from employers (2%) indicates that employers are either ignorant of the existence of these programs or are reluctant to send their workers to them, perhaps seeing them as of little value. But it also reflects the fact that

relatively few students come to college from employment.

Question 26 asks:

"Did you come to college directly from."

A.	High school	59%
B.	High school-BOCES	12
C.	A job	16
D.	Homemaking	7
E.	Military service	2
F.	Unemployment	5
G.	Other	1

It is important to note that while many of the 16% who has jobs before going to the two-year college might not have held these jobs in their areas of concentration at college, only one-eight of the students with a job heard of the program first through an employer.

Surprising, too, is that 12% of the students heard of their programs first from a visit to campus (question 3), which reflects the low stress frequently given these programs in college catalogs and recruiters' sessions at the high schools. Examining response by program, the college recruiters seem to play a heavier role in introducing students to the "typical" vocational program; often auto mechanic , rather than the lesser known offerings such as plumbing or office assisting. This may reflect an admissions orientation toward recruiting for the college as a whole,

with only modest attention to vocational programs.

Returning to question 26 on student origin prior to coming to the community college, we see that many (71%) arrive from high school and BOCES. It is disappointing that not more are from older segments of the population, particularly housewives and veterans.

Considering that many people are financially unable to attend college after high school, the veteran has an opportunity which our study indicates is not taken, perhaps from lack of awareness. Not once did any of our interviewees comment on veterans as a potential source of students.

Efforts to attract housewives can be quite successful especially when local media are employed. One of the seven colleges, which uses extensive advertising for its certificate programs through the Continuing Education Division, draws 13% of its student body from housewives--nearly double the rate of 7% found elsewhere. This active recruiting policy permits programs to thrive. Without such efforts to recruit post-high school individuals, the school would not be able to run these programs. Active recruiting must be considered in planning many types of programs.

Program Quality

Considering that many of the vocational program applicants are students who have a background of academic difficulty, we felt that the responses to questions 2 and 6 showed that these programs are doing a good job in stimulating an interest not found in previous education. Question 6 asked:

"How well has the program met your expectations?"

A.	Very well	43%
B.	Reasonably well	41
C.	Not very well	17

More critically, question 2 asks:

"How well do you like the program you are in?"

A.	Very well	56%
B.	Reasonably well	37
C.	Not very well	6

This rate refelcts a satisfaction probably exceeding that of many students in traditional academic programs at either two or four-year schools, many of whom would probably be happier in more pragmatic, job-oriented programs. programs. Perhaps this is reflected in question 4 as well, which queried:

"Why did you choose to enroll in the program you are now in?"

A.	It appealed to me	67%
B.	It was recommended to me	20
C.	It will help me get a job	35
D.	It will help me transfer into a degree program	5
E.	It follows naturally from my high school or BOCES program	17
F.	Other	15

Two-thirds of the students enrolled because the program appealed to them. Can this be said of most college students? The next favored reason was that the program will help them to get a job (35%). Only 5% enrolled for potential transfer reasons. Many people interviewed saw these programs as "back doors to degree programs". This simply is not the case, according to our respondents.

Perhaps the most reliable indicator of program quality can be determined by the quality of the teaching staff. Student rating of ability to teach in the best indicator of quality available to us, and the student response indicated that teacher quality was high. When asked in question 11:

"In your opinion, how good is the teaching ability of instructors in your program?", the responses were:

A.	Very good	64%
B.	Reasonably good	31
C.	Not very good	6

Question 12 asked:

"In your opinion, how up-to date in their fields are the instructors in your program?"

The response was:

A. Very up-to-date	66%
B. Sufficiently up-to-date	31
C. Not sufficiently up-to-date	3

While the students had high regard for the teaching ability and field knowledge of their teachers, the instructional program did leave something to be desired. Question 15 asked:

"Have you been able to skip those parts of the program in which you have already mastered the skills and information?"

A. Yes	19%
B. No	73
C. Not sure	7

Here is a major difficulty in some of the programs, especially those with a rigidly defined subject matter. The science-oriented programs provided the most problems here, especially when one considers responses to question 14 which indicates that students in "hands on" programs are more able to work at their own pace than their more classroom-oriented peers. Most students indicated that they could work at their own pace when asked:

"Can you work at your own pace in the program?"

A. Yes	60%
B. No	31
C. Not sure	10

When we consider only those students from the "hands on" programs, about 70% can work at their own pace. For the more scientific programs such as nursing and technologies, the rate is understandably less. The programs in which the fewest students felt they could work at their own pace were the office skills and secretarial programs.

Students felt that they could make imputs in how programs could be improved, answering question 18:

"Do you have a chance to suggest ways in which the program can be improved?"

A. Yes	68%
B. No	21
C. Not sure	11

Despite this positive response, when asked to suggest program improvements, few were able to list improvements other than greater input of money for additional teachers, equipment and facilities. Of the 223 suggestions of ways that programs could be improved, half were for more equipment, space, and teachers; or more directly to the point--more money.

Other suggestions for program improvement were frequently elaborations of our structured questions, e.g., work at own pace, more practical orientation. But many points are quite well taken although they are ways in which all education can be improved.

Many mentioned the need for more teacher coordination. Generally these were students in the highly sequential programs where large teaching staffs were involved. A related complaint was that too much or too little time was being spent in certain areas. While classes with wide ranges of ability and background necessitate some dissatisfaction, this can be alleviated through some of the proposals mentioned in the section on instruction.

The need for electives was often voiced by students. Many of these programs are quite rigid, but if provisions were made to allow students to progress once competence is demonstrated, electives could be fit in as integral components of their education.

An additional desire expressed is the need for more on-the-job, work-study arrangements. Nearly all programs we studied are very practical, and many involve extensive field experience. But the establishment of relationships between potential employers and the students would reinforce the students' desire to learn as well as giving them a head start in today's job market.

It should also be mentioned that only one student suggested awarding a degree as an improvement.

The feeling of inadequate program support revealed in responses to question 23 was the crux of several queries. Question 10 asked:

"Do you think that your program is given enough support (money, equipment, staff) by the college administration?"

A. Yes	24%
B. No	71
C. Don't know	6

This overwhelming negative reaction does not square with the views of administrators who were interviewed. Accurate or not, this perception is cause for concern.

A number of students sensed that their programs also suffered on a relative basis in terms of the attitudes of other students and staff and administrators. Question 7:

"Do you think that the college administration believes that your program is as important as others in the college?"

A. Yes	46%
B. No	33
C. Don't know	21

Question 8:

"Do you think that students and staff members in other programs believe that your program is as important as others in the college?"

A. Yes	37%
B. No	37
C. Not sure	25

Responses to these two questions were uniform across all campuses except one where the separate campus probably limited comparisons to other certificate programs on the same site rather than to degree programs on the distant, main campus. Removing this one school from the total response changes the results to question 7:

A. Yes	33%
B. No	44
C. Not sure	22

Many students feel that their programs are getting the short end of things despite assurances by administrators to the contrary.

Likewise, in question 8, removal of the same college from consideration gives a far more negative focus on campus attitudes toward the certificate and diploma programs. Question 8, without this college, yields:

A. Yes	27%
B. No	48
C. Not sure	24

Three additional questions dealt with instruction. Question 16 asks:

"Do you think that there is enough practical work in your program?"

A. Yes	74%
B. No	20
C. Undecided	7

Question 17 asks:

"Do you think that there is enough theory in your program?"

A. Yes	79%
B. No	12
C. Undecided	10

These responses indicate a strong student view that the balance is maintained. The only program where this balance did not exist was electrical construction, with the students there feeling that too much electrical theory was required.

Related to the questions on theory and practice, is question 13:

"What do you think of the length of your program?"

A. Too long	7%
B. About the right length	68
C. Too short	25

The interesting thing to note here is that attitudes on program length did not differ between one-year and two-year programs. From this we conclude that the issue is not so much one of length as one of ability to work at one's own pace.

College Services

We also asked students about their placement and counseling services. What these responses underscore is the heavy reliance placed on instructors to perform these services, which supports interviews in which instructors view such functions as part of their duties.

Question 19 and 20 dealt with this issue. Question 20 asked:

"Who do you turn to for help in finding a job?"

A.	College placement officer	21%
B.	Instructors in program	35
C.	Employer	21
D.	Friends	30
E.	Family	23
F.	No one	16
G.	Other	10

Question 19 asked:

"Do you expect any serious problems in getting a job after completing this program?"

A.	Yes	21%
B.	No	54
C.	Don't know	25

Three-quarters of the students in these programs will be receiving their diplomas only one month after responding to this questionnaire. One would hope that these students would have jobs lined up at least that far before graduation.

That many do not (the "yes" and "don't know" categories), indicates that these students need more help in career planning than they are getting.

Question 1 also dealt with the student services on campus, asking:

"Who at the College has been helpful to you with your personal problems?"

A.	A counselor	11%
B.	An instructor	49
C.	Friends	44
D.	Others	5
E.	No one	19

While previous sections show that the seven colleges differ considerably from one another in approaches to and operation of certificate/diploma programs, the student views set forth in these questionnarie responses are quite uniform across campuses. Instead, differences in views relate to specific programs and are as great within colleges as among them. This means that the views of students represent a rather stable basis on which to make program revisions. Students like and find useful certain structures, certain approaches, certain personnel services. They are also quite precise in denoting structures, practices, and services which they do not like or find helpful. The subsequent section on recommendations draws on their views.

V RECOMMENDATIONS

Administration and Organization

1. We urge that top administrators lead their communities in recognizing the values in career education for many young persons and adults as well as for the regional economy. We suggest, tentatively, that they may choose to counter the rather widespread mystique surrounding degrees and other credentials with positive arguments in favor of occupational education. We think that there need be no intrinsic conflict between career-directed and transfer-oriented programs in two-year colleges. (pp. 31-)

2. We urge top administrators in two-year colleges to exercise their powers in developing appropriate certificate/diploma programs. Such leadership should result in an institutional image denoting these programs as fully worthy associates of programs leading to degrees and transfer. We urge the sort of leadership which will result in the adoption of institutional policies and procedures to foster growth of certificate/diploma programs--thorough assessments of regional economic and employment conditions, generous open admissions procedures, skillful recruiting, personnel standards equitable to instructors in career education programs, encouragement of appropriately divergent instructional and evaluative modes for certificate programs, and careful follow-up studies of graduates. (pp. 31-)

3. Certificate/diploma programs are more likely to succeed if their critical mass (numbers of staff, students, physical space) is comparable to that of other programs on a campus or if they function as integral and respected parts of degree-granting academic units. Whenever possible, colleges should undertake certificate programs of a sufficient size to give them divisional or departmental status or place smaller certificate programs under the auspices of hospitable degree-granting divisions. (pp. 36-)

4. When certificate/diploma programs are located in a separate division we recommend that every effort be made to keep this division closely allied to kindred degree programs in technologies, business, health services and the like. Such an alliance should include easy exchange of students with options to transfer each way, sharing of staff, common courses, cooperation in recruiting and placement, and sharing of instructional and curricular ideas. (pp. 36-)

5. Certificate/diploma programs housed in degree-granting divisions should be as closely integrated as is feasible and treated with full equity. The practical "hands on" nature of the certificate courses should be maintained. There should be an easy mixing of certificate and degree students in classes and a movement of students from one program to another. Options should be open for one-year certificate students to move into the second year of degree programs. Staff and facilities should serve both programs. (pp. 36-)

6. We recommend that on each campus there be a single administrative officer responsible for all certificate/diploma programs, no matter what plan of organization is employed. This administrator may be directly in charge of some programs (as a division chairman for example) and indirectly in charge of others (those housed in other divisions), but his will be the ultimate responsibility for the all-college and off-campus relations of all certificate/diploma work. Only thus can other recommendations we make be implemented. The administrator will, hopefully, have experience in career education. Whenever possible, his position should be created through the realignment of responsibilities rather than by the addition of a new administrative slot. (pp. 36-)

7. College administrations must be realistic about what and how many certificate/diploma programs are to be offered, and should not be persuaded or forced into programs which fit neither regional settings nor institutional character. But such realism needs to be based on a solid assessment of both regional and institutional characteristics, goals, and futures as best as these can be determined. In deciding on new certificate/diploma programs we urge administrators to use realism and all available information tempered with a willingness to experiment and speculate. (pp.38-)

8. For reviewing certificate/diploma program costs and efficiency,and for planning new programs, we urge the colleges and SUNY to move to program or mission budgeting and cost

accounting. Current systems of fiscal accounting and planning make it difficult for institutions to compare the costs and efficiency of these programs with other programs and services. A program-based analysis of costs and needs would make more rational than at present the criteria on which new and additional funds are allocated to certificate and other programs. (pp. 41-)

9. Whatever methods of funding allocation are used, we urge each college to fund certificate/diploma programs in ways which will encourage individualization in learning and instruction as well as instructional innovation. Allocation of funds on a formula inclined to make all college programs alike would be especially detrimental to programs where performance of individuals in shop or laboratory conditions is the heart of the matter. (pp. 41-)

10. We recommend to administrators, faculty associations, trustees and state authorities that certificate/diploma faculty be treated equitably and as full citizens of the academic community. Thus we urge adoption of personnel policies and procedures which will reward this faculty for its own background of experience, its own special instructional and counseling skills, and its continuous effort to keep abreast of the fields of work which these programs serve. Any required formal study which leads these instructors away from their fields of expertise ought to be discouraged. Individually and as a faculty, these instructors should have

salary, tenure, rank, title and working conditions equal to those of other equally qualified staff members but determined by the special conditions of their work. (pp. 43-)

11. Two-year colleges should use the new Associate in Occupational Studies degree only where it fits the conditions of special career fields and never as a substitute for certificate/diploma programs. There should always be practical "hands on" programs of two years, one year or shorter duration, admittting openly from all ranks of society, and encouraging individual progress toward performance standards necessary for job entry. In any case where use of the A.O.S. degree would compromise a program of this sort, the degree should not be used. (pp. 48-)

12. Certificate/diploma program planning and decision making (to establish, seriously modify or terminate) should be made on a thorough knowledge base, as part of an on-going institution-wide planning and development process, and with regional, state and national trends and needs in view. The State University and the State Education Department as well as other public agencies should provide both leadership and resources to the colleges in this effort. The present institutional decision making schemes, which usually encourage much initiative and influence on the part of interested staff members, should be strengthened to keep faculty and administrators as key participants, but extended and opened to all other appropriate persons and sources of information. (pp. 51-)

13. We recommend to colleges undertaking new certificate/diploma programs that they study carefully the potential markets for graduates, the high schools and BOCES and others; work closely with potential employers from the earliest possible moment; address the potential student market in forceful and persuasive ways; and listen very carefully to knowledgeable people in the region. During program operation, we recommend a continuous program to inform, recruit, and listen to the world outside. Particularly, we recommend a much more sophisticated and lively use of printed materials and the media than is now the case. Certificate programs need their own catalogs which reflect their special flavor and style. (pp. 56-)

Student Personnel Services

14. The concept of open admissions should be adhered to in certificate programs. Although pressures are increasing for more stringent admissions requirements, these will serve to restrict the entry of many members of the population who can profit most from such skill-oriented programs. (pp. 59-)

15. Recruitment should be expanded in those colleges which have small numbers of students in these programs. Without a critical mass (which will vary in size depending upon whether it is a separate program or an integral part of another one) these programs will not enjoy the instructional flexibility necessary to develop individualized programs. Also, small programs (e.g., 10 students) do not warrant the particularized services we feel they require to be highly successful. (pp. 59-)

16. Certificate program recruitment should be modified in the direction of enrolling more minority group members, the rural poor, veterans, older adults, and non-high school graduates. A part of this modification should involve making the certificate programs functionally more attractive to members of these groups. (pp. 59-)

17. Opportunities for advanced placement and advanced standing need to be expanded in certificate programs. This would facilitate the enrollment and rapid passage of students able to demonstrate some of the skills taught in the programs.

The development of performance-based objectives would enable the measurement of student readiness for advanced placement. (pp. 59-)

18. Colleges should adopt the practice of rolling admissions. This, in conjunction with advanced placement, allows for the spaces of students leaving the program to be rapidly filled and a condition of high enrollment to be maintained. (pp. 59-)

19. Each college should administer a battery of diagnostic and vocational performance tests to all incoming students in certificate programs. Information derived can help determine the special needs of each student and programs to meet these needs. (pp. 65-)

20. Many students in certificate programs are in need of some remedial assistance. Appropriate courses should be tailored to these needs and become regularly scheduled components of the programs of students requiring them. (pp. 65-)

21. Each college should develop in-service workshops to enhance the counseling abilities of instructional staff members working with students in certificate programs. If possible these workshops should be led by experienced members of the college counseling center. (pp. 65-)

22. Colleges should acquire the services of a counselor experienced in working with vocationally-oriented students. Such an individual would not pre-empt the on-the-spot services provided by instructors but rather offer skilled back-

up support when necessary. Instructors should be encouraged to refer more serious counseling problems to this individual. (pp. 65-)

23. Each college should consider adopting a faculty advisor system for the students in certificate programs. The services of advisors can include initial personal orientation to the certificate programs, general academic and personal advising during the year, informing students of counseling opportunities available on campus, and referring students to other individuals and agencies. (pp. 65-)

24. Each college counseling center should initiate self-studies and student surveys geared to determining the effectiveness of their various programs in meeting student needs. (pp. 65-)

25. The placement of graduates of certificate programs should be more formalized. Although frequently effective in terms of finding jobs, the present methods are often limiting in terms of geographic area and range of job opportunities. Formalization should include the acquisition of a counselor experienced in vocational job placement who has this duty as one of his prime responsibilities. (pp. 65-)

26. The vocational placement counselor should also be utilized in the development of cooperative work experience opportunities for students in certificate programs. (pp. 70-)

27. Each college should survey its graduates of certificate programs in order to acquire information on an annual basis concerning the improvement of its admissions, counseling, instructional and placement functions. (pp. 70-)

Instruction

28. We recommend as an instructional model for certificate/diploma programs one insuring optimum flexibility for the student to proceed at his own pace and to have maximum options along the way. Such a model would, in one form or another, combine the elements of open admissions, diagnostic testing, performance-based advancement, remedial modules of instruction, developmental modules of instruction, advanced placement, advanced standing, and flexible graduation or completion points. (pp. 76-)

29. For certificate/diploma and other career programs, and possibly for an entire college, we urge serious consideration of a new institutional calendar with numerous points of entry and departure, modules of instruction of varying lengths, a "rolling" admissions policy, and instructional and other services designed with this degree of flexibility in mind. (pp. 79-)

30. We urge instructional and counseling schemes which will optimize opportunities for students to move laterally across programs, from certificate to degree programs, from degree to certificate programs, from career to transfer programs, with encouragement and facility, whenever this is deemed appropriate. We also urge adoption of ways in which certificate students can be encouraged to carry elective subjects out of field. In particular, we commend any two-

year college structure in which a degree transfer student who wishes to change into a certificate program for the right reasons is considered to be making a perfectly appropriate move. (pp. 79-)

31. Modular scheduling in certificate/diploma programs will facilitate setting up of cooperative work experiences, a move we recommend. Certain modules can be scheduled by staff and students in a craft, plant, office or public service. Such on-the-job experiences can add realism to study, help in future placement, and tie employers closer to the programs. (pp. 81-)

32. The backgrounds of faculty and the kinds of professional improvement they undertake should vary according to the type of certificate/diploma program in which they are teaching. Their broad role in counseling and placement should be recognized and supported. It is especially important that instructors not be led away from their fields of expertise by unrelated academic requirements. (pp. 82-)

33. Colleges are urged to consider seriously plant and equipment needs when undertaking new certificate/diploma programs, and to continuously review equipment needs for ongoing programs. Specifically, we recommend a focusing on replacement of equipment initially purchased with special Vocational Education Act funding and which, though now relatively new, will become obsolescent in a predictable period of time. We suggest that capital equipment budgets be

planned with fixed schedules of equipment replacement. We urge colleges with career and technological programs to have a single administrative officer responsible for the replacement of equipment through purchase or gift. (pp. 83-)

Regional Relationships

34. Program advisory committees should be re-examined to see if they are broadly representative of interest groups in the region (e.g., unions, large industries and firms, business and professional bodies, minority groups, women, and anti-poverty agencies). We believe that a special effort should be made through these groups to relate to the region and to other vocational programs such as those in BOCES. (pp. 87-)

35. We recommend the formulation of advisory committees at the earliest possible stage of program development. During the initial stage they can help validate a program, assist in acquisition of equipment and the planning of facilities, and work for its acceptance in the community. On-going responsibilities such as reviewing curricula, reporting business trends, and fostering program growth should also be accepted by advisory committees and performed in an organized manner. (pp. 87-)

36. We urge a much more systematic approach to employers in the region than is now characteristic for most certificate/diploma programs. Employers need to be identified, consulted with, invited to campus, and asked to advise on instruction, manpower needs, and placement. They should, too, be involved systematically in those regional planning and development efforts for which colleges take the initiative. (pp. 90-)

37. Colleges should take the initiative in seeing to it that high school counselors and instructors are well informed about certificate/diploma programs, are in close informal contact with these and other programs, and are involved in those program decisions affecting admissions and advanced placement. We consider it especially important that college personnel join with secondary school staff in overcoming a certain implicit bias against taking non-degree programs in college. (pp. 91-)

38. BOCES vocational divisions and two-year college certificate programs are engaged in the same sort of work, albeit usually at two different levels and in somewhat different contexts. We urge that these two agencies come together regularly to improve articulation of like programs, iron out differences and misunderstandings, and share ideas and practices. Wherever feasible and desirable, we urge the two institutions to build common programs and share common facilities. (pp. 93-)

39. Colleges should take leadership in coordinating regional resources in such a way that poverty groups could avail themselves more fully than at present of certificate/diploma program opportunities. Such leadership will demand both imagination and verve in trying to design appropriate curricula, securing funding, communicating, winning the cooperation of other relevant public agencies, and the like. (pp. 95-)

40. We note that college trustees and council members are often in an unusually good position to relate college goals and programs to regional interests and needs. We therefore urge trustees to take an especial interest in certificate/diploma and other regionally significant programs, and to help in interpreting such programs to the people of the region. (pp. 97-)

Responsibility of State Government

41. We recommend to State University of New York and the New York State Education Department the following steps to encourage effectiveness of certificate/diploma programs at two-year colleges:(pp. 100)

A. Sponsor, fund and release from regulatory norms pilot programs designed to test models of instruction of an innovative sort.

B. Modify full-time enrollment (FTE) regulations and accounting schemes to encourage certificate/diploma programs to operate with maximum flexibility without financial penalty.

C. Assist institutions in obtaining financial aid sources for poverty and other disadvantaged groups who cannot now afford to take certificate/diploma work.

D. Coordinate and better utilize state resources in planning and development to assist individual colleges in making decisions about career education programs.

E. Use the A.O.S. degree as a supplement to but not a replacement for certificate/diploma programs.

F. Provide leadership to all public two-year colleges in making decisions about certificate/diploma programs by holding conferences, issuing informational literature, visiting campuses, urging inter-campus exchanges, and so forth.

G. Lead in regional efforts to better coordinate vocational instruction at BOCES, two-year colleges, and other educative agencies. Particularly, leadership is needed in coordinating instruction, student movement, and staff and facilities sharing between the BOCES and two-year colleges.

H. Assist the colleges as they seek better coordination of all regional resources bearing on certificate/diploma and other career programs.

I. Adopt regulatory policies which encourage individual colleges to experiment with certificate/diploma programs, to be flexible, to let individuals proceed at their own pace, to try new things, and to achieve quality of instruction regardless of size of enrollment.

J. In the case of SUNY, to exercise a more vigorous role in evaluating proposals for new certificate/diploma programs.

K. In short, to lead, assist, offer resources, help provide a state-wide perspective for planning and development; not to dominate or direct or obfuscate through bureaucratic regulation.

APPENDIX A

REQUEST FOR DATA

REQUEST FOR DATA

Specific requests for information varied slightly from college to college. This was the request made to Tompkins-Cortland Community College.

Factual data needed on these TC3 Certificate Programs--Mechancial Technology, Construction Technology, Licensed Practical Nursing, Human Services.

Enrollments in each program including initial enrollments, dropouts, number in each program now, numbers estimated to complete each program.

Breadkown in enrollments by sex.

In general terms, how programs serve special groups, i.e., blacks, homemakers, the poor, veterans, the handicapped.

Breakdown in enrollments by county of origin.

Admissions criteria for each program.

Admissions process for each program (how done and by whom).

Origins of students in programs by career line--how many from jobs, from secondary school, from secondary school-BOCES combination, from military service, from homemaking, by transfer from a degree program, by transfer from another college, on leave from a job, holding a job concurrently, etc.

For enrollments, rough breakdown by ages--under 20, between 20 and 30, over 30.

Instructor-student ratio for TC3 as an institution--instructor-student ratio for each certificate program.

Estimated cost per student unit of instruction at TC3 as an institution.

Estimated cost per student in each of the certificate programs (if this sort of data is available).

General profile of instructors in certificate programs (training, education, experience)--<u>not</u> by specific staff member.

REQUEST FOR DATA

Statement of goals, curriculum outline and other printed data for each certificate program. Data on internship experiences, if any.

Names of any certificate programs which have been terminated.

Inventory (if any) of software and hardware used specially in certificate programs.

Tuition charges per student in certificate programs (only if different from general college charges).

Any appreciable sources of financial support for each certificate program over and above state, county, tuition shares.

Roughly what sources of informational data are compiled in each student's personnel folder (general sense of this only).

APPENDIX B

SAMPLE INTERVIEW SCHEDULES

A TWO-YEAR COLLEGE STUDY

Interview Form: Director, Certificate or Diploma Programs

Institution _____

Let me explain the purpose of this study, briefly. Then let's specify the name of each program we will talk about.

1.1: What are the goals set for each program?
Are they different than they were in the beginning?
How were they set in the beginning?
By whom?
Are they reviewed periodically? By whom?

1.2: How and by whom was the decision made to have each program in the beginning?
On what sorts of evidence, planning data, employment surveys, requests, etc., was the decision based?
How many individuals or groups were involved in the early decision making process?

1.3: If a decision were made to continue or to terminate any program, how and by whom and on what evidence would such a decision be made?

1.4: Do you and your associates consider each program to be a successful one, a moderately successful one, or a less successful one, based on the goals you have for it? (Consider each program separately.)

1.5: On what criteria do you base your judgment of success of lack of it?

(Use probes where necessary to elicit information. If little comes forth on planning, name some typical planning information which may have been used, or ask for instances of request from public, employers, or schools.)

2.1: How and on what criteria are the students for each program selected?
Who does the selecting?
How is recruiting done?
What relations exist with high school and BOCES counselors?

A Director

Are employers involved in selection and recruiting?
Is selection done by the normal college admissions process?
If not, how is it done?

(Probe to see how extensive recruiting is. Is it done in businesses and industries?)

2.2: What are the students in each program like?
How many are there--how many men, how many women?
By what routes have they come to the program--school, BOCES, armed services, work, employment services?
What is the median age, approximately?
The ranges of ages, approximately?
Is there test evidence to indicate ranges in academic ability, motivation and interests, dexterity, etc.?
What is this evidence?
Can we see it, in confidence?

2.3: How are these students counseled educationally and vocationally?
How are they assisted in getting a job?
What criteria are used in placement--how is a person matched with a job?
Is placement done by the college placement service or in some other way?

2.4: How do these students get along in the college outside their specific program?
How well are they accepted by other faculty and staff?
How well are they accepted by students in the degree programs?
How active are they in the extra-curriculars (sports, publications, music, social affairs)?
How widely do they use such facilities as library, dining rooms, lounges, etc.?

(Use probes to bring out responses to "2" questions. Start with initial question; use sub-questions as needed. Try to get as precise figures and estimates as you can.)

3.1: How are instructors for each program chosen, and on what criteria?
Can you describe briefly and informally for us the backgrounds and qualifications of each instructor?

A Director

How closely is each instructor linked to the occupational field for which his courses prepare students, and in what ways is he so linked?

3.2: How do instructors in each program get along in the wider college community?
How are they treated by faculty in the degree programs, and how do they handle such faculty?
How active are they in general college activities--faculty meetings, committees, social life?

3.3: How are instructors in each program treated by the administration?
Do they enjoy conditions of equity in relation to other staff when it comes to salary, increments, promotions, tenure (if any) etc.?
What is the turn-over rate in staff?

(Probe lightly knowing that individual faculty members and general administrators will give us more on this.)

4.1: Speaking generally, what is the content of instruction in each program, and how does learning progress or develop?
Is there a formal curriculum?
Is it written?
May we see it?
How is the curriculum worked out and by whom?
How is it reviewed and revised, and by whom?
Are employees, employers, personnel people or others involved in curriculum decisions? How?

4.2: How is it determined that the curricula fit properly between secondary school and job entrance, and who makes such a determination?

4.3: How is curriculum evaluated--how is it determined that it is realistic in preparing students for job entry?
Who evaluates and how often?
Are changes made on a basis of evaluation? Specify.

4.4: What are the chief methods of instruction used, and in what proportions?

A Director

What instructional innovations, if any, are under consideration?
Is laboratory or shop work predominant, or are lectures, or are discussions and recitations, or are field projects, or are these balanced?
Who makes instructional decisions and on what basis?

4.5: Is the program work-based in the sense that students are on a real job part of the time as a requirement of the program?
If yes, specify.

4.6: Generally speaking, what machinery, equipment, software, media or other materials are used in instruction?
How are decisions made on this and by whom?

4.7: What part do students take in curricular and instructional decisions, if any? Specify.
Do they help evaluate curricula and instruction? Specify.

(Probe only as far as respondent seems to be knowledgeable. We can get much of this from instructors.)

5.1: Why is each program a one-year (two-year) one? (Please be quite specific.)
In a two-year program, how does the second year build on the first?
In the one-year programs what links, if any, are there to the degree programs?

5.2: If this is a one-year program should it, in your opinion, be extended to be a two-year program?
Why or why not?
How would you reach a decision to do this, and who else would be involved in the decision?

5.3: If this is a two-year certificate program, should it be made into a degree program in career education (AOS)?
Why or why not?
In what ways might a decision to go to a degree program be reached, and by whom?

A Director

In your view, how would the program be changed if it were to become a degree program?
Is this being considered now?

6.1: Does each program enjoy conditions of equity in relation to others in the college?
What about its level of support and encouragement from central administration, from the board of trustees or council?
What about its level of fiscal support in comparison with other programs?
Does the program receive equipment, supplies, other items it requests? How successfully?

6.2: Do you feel that each program has the support of county sponsors (for community colleges), of public, and of business, industry and unions?
What is the basis for your judgment here?

6.3: Does each program enjoy prestige in comparison with other college programs?
Explain the basis for your judgment?

6.4: Do general college regulations give students the freedom to take courses in other programs and departments and to use general college facilities? Specify.

(For community colleges, probe for level of regional support and prestige, and evidences of this.)

7.1: Are there any particular groups in the region, minority groups, the poor, women, the elderly, etc., which have been unable to profit from these programs when they wished to do so?
Are there any such groups which have profited unusually from the program?
Explain why a group has not been able to profit or has profited unusually.
How is each program related through recruiting, admissions and placement to the needs of minorities, the poor, women, the elderly, etc.?
Explain.

A Director

7.2: How is each program coordinated with other similar programs in community or two-year institutions, with preparatory programs in BOCES and secondary schools, with technology and advanced vocational programs in four-year colleges, and with union apprentice and industrial manpower training programs?
What is the degree of coordination, how does it work, how was it initiated, and who makes the decisions?

7.3: How is each program coordinated with other diploma or certificate programs of the college, with degree programs of the college, with the college's continuing education program?
Specify in each case of coordination, the degree of coordination, how it takes place, and who is responsible (i.e., do certificate/diploma programs share labs or shops, pool equipment, exchange instructors, carry on team teaching, share counseling and placement, etc.) ?

7.4: If your institution is a community college, what region do you see each program as serving in terms of selection of students, placement, employment, opportunities, etc.?
To what degree and in what ways does each program meet regional needs?

7.5: Does each program have a formal advisory council or committee?
In what ways does this council or committee function?
What part does it have in decision making on selection of students, placement, evaluation, curriculum development?
How often does it meet?
What happens at meetings?
If such advisory work is done more informally, please explain.

(Probe for brief responses here--get a general picture--try to get at the degree of regional coordination.)

8.1: Can you summarize by describing an important decision made about one program, and indicate, step by step, what took place and who was involved, and how the administrative organization of the college as it

A Director

relates to this program functioned?

Please talk informally about these programs and career education generally.

B TWO-YEAR COLLEGE STUDY

Interview Form: President or Dean of the College

Institution_____

Let me explain the purpose of this study, briefly. These are the programs we wish to talk about:

1.1: As you view it, what are the chief characteristics of this institution?
What are its principal goals and directions for the immediate future?
How does and can it serve the people of the region and the state?

1.2: More specifically, how do you view certificate/diploma programs as meeting institutional goals and directions?
Which purposes of the college and its public are best served by these programs?
Do certificate/diploma programs in any way hinder or make more difficult the achievement of institutional goals?
Can you rank the certificate/diploma programs in the order of their successfulness?
Have any certificate/diploma programs been discontinued? Why?

2.1: What do you think of the students in the certificate/diploma programs?
How do they get along in the college in comparison with students in other (degree) programs?
What is your relation to these students?

3.1: What do you think of the faculty and staff in the certificate/diploma programs?
How do they compare with other faculty members (probe here with specifics, if necessary)?
How do they get along with other staff members?
Is the degree-non-degree issue a serious one?
What are your relations with the particular staff members?

3.2: Is your faculty-staff organized? In what form and for what purposes?
Specifically, do you negotiate with a staff association for an annual contract? If so, how are negotiations for next year proceeding?

B President or Dean

4.1: As you look at the curricula and instruction in the certificate/diploma programs, what do you think of these?
Can you cite programs with especially strong curricula and/or instruction? What are these? Why are they strong?
Do you have an impression of weakness or lack of strength in the curricula and teaching in any of the programs? Which ones? Why?

4.2: Do you believe that current certificate/diploma programs are sufficiently realistic to prepare people for the jobs or skills aimed for? Please illustrate.
Are these programs sufficiently theoretical to provide an intellectual basis for the world of work? Please illustrate.

4.3: Do you believe that all college programs should have a component of liberal and scientific studies?
Do the certificate/diploma programs have this? If not, why not?

5.1: Is your college interested in moving to the two-year degree program in career or vocational education? Why or why not?
If you are moving in this direction, what steps have been taken?

5.2: How would your one-year programs be altered if they were changed to two-year programs?
How would your two-year certificate/diploma programs be changed if they were converted into degree programs?

(5.1 and 5.2 may not apply to Alfred and Delhi.)

6.1: Do the certificate/diploma programs enjoy a condition of equity with other programs of the institution?
More specifically, do these programs receive an equitable share of administrative services, counseling and placement services, physical facilities, equipment and materials, library and media support?
Please give illustrations to support your general views here.

B President or Dean

8.1: How is decision making regarding certificate/diploma programs exercised?
To be specific, how would a decision be made concerning institution of a new program, or termination of an existing one, or modifying one considerably?
Who would be the parties to making such a decision?
On what evidence or basis would a decision be reached?
What would be your role? (If a real decision making situation can be used, so much the better.)

Open-ended summary questions:

What are basic institutional plans for the future which will affect diploma/certificate programs? How will these programs be affected?

What is your general assessment of the values in certificate/diploma programs? Do you wish to see practical programs leading directly to job entry continue at this college? Do you favor expansion of such programs? If so, which ways?

What are the conditions under which certain of these programs have succeeded here? If these conditions obtained, would such programs achieve success on other campuses in the state?

Are there documents which will add to our knowledge of the nature and plans of the college? What are these? Can we read these?

E TWO-YEAR COLLEGE STUDY

Interview Form: Advisory Committee Member

Institution _____

Let me tell you briefly of the nature and purpose of our study. I am particularly interested in your views about the _____ _____ program of the college.

1.1: What do you think of the program?
How well does it meet its goals?
Would you rate it as very successful, successful, reasonably successful, or not very successful?
On what basis would you make your rating?
If there should be changes, what should these be?
How close is your contact with the program?
Are you familiar with the students, the instructors, the curriculum, the shop work, placement of graduates, how graduates succeed on the job?

1.2: How does the advisory committee function?
Was it set up before or after the program was operating?
If before, what part did the committee take in starting the program?
Does it meet as a group or operate individually?
If it meets as a group, how often?
How are agendas established?
What sorts of issues does it deal with (curriculum, placement, recruiting)?
What decisions, if any, is it asked to give advice on? (For example, does the committee help to evaluate the program?)

1.3: Is the advisory committee representative of the people of this region?
How was it selected and by whom?

(Probe here a little to see what is said about the lack of union representation.)

6.1: Do you think that the students and teachers in this program are treated by the college equally with students and staff in degree programs?
Does this program get its fair share of funds, administrative and counseling services, placement services, library facilities, equipment and housing?

E Advisory Committee Member

Does the college regard this sort of program as important?
On what criteria do you base your judgments here?

7.1: Do you think that the program is tied in well with regional (state) needs?
Is the training program realistic--does it prepare students to enter jobs effectively?
Are employers, unions, other parties in the region involved in the program?
How does this work fit in with what the BOCES is doing in vocational education?

8.1: Suppose that an evaluation of this program was made, and the college decided to seriously change the program, perhaps to eliminate it. How would you and other members of the advisory committee be involved in such a decision?

9.1: Is the program one which can be used by anybody with qualifications?
Does it provide an opportunity for poor people, for minorities, for women?

F TWO-YEAR COLLEGE STUDY

Interview Form: Director of Counseling or Counselor

Institution_____

Let me explain briefly the nature and purposes of this study. We are concerned chiefly with these programs:_____

1.1: Do you have any written reports or brochures concerning the counseling services?
If so, may I have copies or read reports?

1.2: If materials and reports do not show these things, will you please discuss briefly the counseling operations at the College, your point of view about college counseling, and give me some sense of the types of information contained in a student's personnel folder (we may have obtained this already).

2.1: How are students informed as to the availability of guidance and counseling (brochures may be the answer)?
Are there any special services provided for students in certificate/diploma programs?

2.2: What tests are administered to students?
Do certificate/diploma students take any test not required of others?

2.3: Is there any specific orientation program for certificate/diploma students?

2.4: Specifically, what efforts are made to assist students in choosing academic programs suited to their interests and abilities?
Please explain how this works in the case of students in vocational programs?

2.5: Are special efforts made to counsel low income students? Minority group students? Specify.

3.1: Are any members of the counseling staff prepared specifically for vocational guidance?

F Director of Counseling

3.2: What part do faculty members in vocational courses (certificate/diploma) take in counseling? Specify.

6.1: What facilities are available for academic and personal and occupational counseling?

6.2: In general, are students in certificate/diploma programs given as much counseling time as are students in degree programs?
Is there a way to document the fact that they are or are not?

6.3: Are any compensatory programs (reading, study skills, math) available to students in certificate/diploma programs? Specify.

7.1: What relationships does the College counseling staff have with secondary school and BOCES counselors? Specify.

7.2: What relationships do counselors have to the placement function? Specify.
If counseling and placement are linked, how do the counselors relate to employers and to the region generally?

7.3: What role does the counseling staff take in decisions affecting admissions? Curriculum? Evaluation? Student life on campus?

G TWO-YEAR COLLEGE STUDY

Interview Form: Instructor

Institution _____

Let me explain the nature and purposes of this study, briefly. We are especially interested in the certificate/diploma programs. You teach in the _____ program. Let's talk about that.

1.1: Were you involved in the decision to set up this program?
If you were, what part did you take?
If not, why not?
Can you tell me something of the process involved in setting up the course?
Why was it set up and by whom and on the basis of what kinds of evidence or criteria?

1.2: How is this program reviewed, updated?
By whom?
What part do you take?
What sort of evaluation is made of the success of the program?
Who makes it?

2.1: How are students admitted to this program, and on the basis of what criteria?
What part do you take in admissions?

2.2: How are students counseled in connection with this program?
What part do you take in counseling?

2.3: How are students placed in jobs after completing the program?
What part do you take in this?
How successful is placement? Specify.

2.4: What are the students in this program like, generally speaking, in terms of ability, skills, attitude, motivation, willingness to work, etc.?
How do you think they compare in these qualities with other students in the college including students in the degree programs.?

G Instructor

2.5: What part do students take in classes, labs, shops, field trips?
Do they take part in evaluating or assessing the program and making changes in it? Specify.

2.6: Are students in the program prepared realistically for the job they wish to enter? Specify.

3.1: How did you happen to come to the college?
To this program?
Had you taught before coming here, or did you teach here in another program?
What sorts of job or professional experience had you had prior to entering this program?

4.1: What is the program like in terms of its content and scope?
Can you describe briefly its goals and nature (we may have seen a curriculum outline before)?

4.2: How is the program taught?
What types of instructional techniques and technologies and materials do you use?

4.3: What are the performance standards in the program?
How are students tested, graded, rated?
Do students drop out?
If so, why in your opinion?

5.1: If yours is a one-year program, do you think it should be a two-year program?
Why or why not?
If it went to two years, what would you change and/or add?

5.2: If yours is a two-year program, do you think it should be a degree (AOS) program?
Why or why not?
If it became a degree program, what changes would you make in it?
Would you increase the practical and applied work, the theoretical work?

G Instructor

Would you add on-the-job training?
Would you require work in the sciences and technologies?

6.1: What sort of library, audio-visual, laboratory, shop and classroom and other facilities do your students have?
Are you satisfied with these?
What else is needed?
Are students in this program as well supplied with these facilities as are students in other programs?
How fully do students use the resources they have? Specify.

6.2: Are you satisfied, generally, with salary, rank, tenure and other employment conditions at the college? Specify.
Do staff members in the certificate/diploma programs get equal treatment with faculty members in degree programs in terms of salary, rank, tenure, etc.? Specify.

7.1: How does your program complement and/or supplement similar programs in BOCES, if any?
Do you use BOCES facilities? Specify.
Do you work with BOCES or high school instructors in any way? Specify.

7.2: How does your program relate to other programs in the college? Specify.

7.3: How is your program related to the world of work--to jobs or skilled trades or public service?
What are relations to business and industry? Specify.
How is your program related to union membership, if at all?
What are the relations with union members and locals?
Do program graduates move into unions easily, if this is necessary?

7.4: What does your advisory committee(council) do for and with your program(if there is one)? Specify.
Is it helpful?
Specifically, does it help with recruiting, placement, relations with management and labor, curriculum, instruction, finances, lobbying?

G Instructor

8.1: If you decided that this course should be quite radically changed, how would you go about making the changes if these cost money, changed direction, involved college policy decisions?

J TWO-YEAR COLLEGE STUDY

Interview Form: BOCES Officer

Institution _____

Name of Officer _____

Let me explain briefly the purposes of this study. Specifically, we are interested in the graduates of the _____ programs at the college.

1.1: What do you think of these certificate/diploma programs at the college in terms of how well they serve the region and the needs of young people?
Have you, or any of your associates, had a part in setting up or revising these programs? Specify.

2.1: Do graduates of comparable programs at BOCES go on to the college for one-year or two-year programs in the same or related fields?
How many?
If not very many, why not?

2.2: How well are these students served by the college programs? Do the latter appear to carry the students along into a further development in preparation for a job or career?

3.1: Are you well satisified with the qualifications and abilities of the instructors who teach in the college's certificate/diploma programs? Please be specific but not about any individual.

4.1: Can you describe how the college curriculum in a field which builds on a BOCES program does this--how do the two programs fit together?

7.1: What are the relations between BOCES, the constituent school systems, and the college, in the matter of these certificate/diploma programs?
Does the college use your facilities?
In what ways and on what sort of arrangement?
Do the respective staffs work together and on what basis?

J BOCES Officer

Do the counselors work together and on what basis?
Is there any give and take between the two sets of students?

Looking to the future, what would you like to see the college do in the matter of vocational education?

APPENDIX C

INDIVIDUALS INTERVIEWED

AGRICULTURAL AND TECHNICAL COLLEGE AT ALFRED

David Huntington	President
Roger Rawe	Vice President
Leigh Schaeffer	Assistant to the President
Shirley Wurz	Dean of Students
Harold F. Babcock	Associate Dean of Students
Milo E. Van Hall	Dean of Planning and Development
George Morgenfeld	Dean of Instruction
Donald Gibbs	Director of Admissions
William Mombert	Manager of Business Affairs
James Bliss	Vocational Counselor
Vera Hinkle	Assistant Librarian
Theodore McClure	President, Citizen's National Bank Wellsville, New York Member, Board of Trustees
Donald F. Jones	Chairman, Wellsville Vocational Division
George Herrick	Professor of Psychology; Chairman, Division of Social and Behavioral Sciences
Lewis Price	Assistant Professor, Social Science
Ronald Coleman	Associate Instructor, Building Construction
Catherine Ingeller	Instructor, Food Service
Philip MacMichael	Associate Instructor, Drafting
William Rennells	Associate Instructor, Automotive Mechanics
Robert Seldon	Associate Instructor, Electrical Service
Ann Thomas	Instructor, Business Office Skills
Herbert Wightman	Curriculum Coordinator, Belmont BOCES; Drafting Advisory Committee
Frank Russell	Guidance Counselor Andover Central School

AGRICULTURAL AND TECHNICAL COLLEGE AT DELHI

William R. Kunsela	President
William F. Kennaugh	Vice President
B. Klare Sommers	Dean of the Faculty
James Parker	Director of Counseling
Glenn Reynolds	Admissions Counselor
Kenneth Bender	Placement Counselor
Herbert Sorenson	Librarian
Anthony Hunter	Director of Reading and Study Skills
Daniel Moskwa	Director, Vocational Education Division
Willard Vetter	Chairman, Science Department
Joseph Greenfield	Chairman, Drafting Department
Roland Groppe	Chairman, Carpentry Department
Sherman Decker	Instructor, Automotive Mechanics
Dorothy Hutton	Instructor, Licensed Practical Nursing Program
Florine Geasey	Nursing Supervisor, O'Connor Hospital; Advisory Committee Member
E. A. Smith	Director, Western Delaware County BOCES; Vice Chairman, Vocational Division; Advisory Committee Member
Donald Tubbs	Guidance Counselor Andes Central School
Richard Webler	Guidance Counselor Downsville Central School
John Ball	Director, EOP, Delhi

HUDSON VALLEY COMMUNITY COLLEGE

Reuben Merchant	Executive Vice President
Richard Peverly	Vice President for Business Affairs
Ralph O'Brien	Vice President and Dean for Student Affairs
William O'Brien	Director of Counseling and Testing
Edward Wightman	Counselor; Associate Professor, Developmental Program
Norma Powell	Assistant to the Placement Director
Tamara Dobrovolsky	Assistant Librarian
Lester Higbee	Chairman, Board of Trustees
Herbert T. Barnard	Dean, Certificate Division
Edward Houlihan	Assistant Professor, Social Sciences; President, Faculty Association
Charles Billings	Associate Professor; Chairman, Department of Banking, Insurance and Real Estate
Allan Bills	Associate Professor; Chairman, Drafting Department; Chairman, Machine Tool Operation Department
Caryl Decker	Associate Professor; Chairman, Electrical Construction and Maintenance Department
Willis Kittell	Professor; Chairman, Dental Hygiene Department
John Richard	Associate Professor; Chairman Department of Automotive Mechanics
Daniel Ashley	Instructor, Automotive Mechanics
Sylvester Labanowski	Instructor, Refrigeration Mechanics
John McLeod	Instructor, Refrigeration Mechanics
Ray W. McKnight	Instructor, Electrical Construction and Maintenance
Robert Valenzi	Instructor, Electrical Construction and Maintenance
Frederick Boettger	Director of Vocational Programs Troy High School Advisory Committee Member

HUDSON VALLEY COMMUNITY COLLEGE CONT'D

R. Conway	Counselor at Urban Center Hudson Valley Community College
Mr. Foley	Guidance Counselor Troy High School
John Kaufmann	Neighborhood Youth Corps, Troy
Ross Phelps	Director, Occupational Education Rensselaer County BOCES
Bruce Wright	Head, Engineering Department Garden Way Manufacturing Employer

ORANGE COUNTY COMMUNITY COLLEGE

Robert Greenman	Academic Dean
George Stangler	Dean of Administration
Lewis Popham, 3rd	Dean of Continuing Education
Howard C. Smith	Associate Dean, Continuing Education
William Morrison	Director of Admissions, Registrar
James Lounsbury	Director of Placement and Student Financial Assistance
Patrick Sweeney	Counselor, Guidance and Counseling Center
Lawrence Turrini	Counselor, Guidance and Counseling Center
Robert Morris	Librarian
Edward Dougherty	Vice Chairman, Board of Trustees
Stephen Winter	Chairman, Business Administration Division
Herman Pollack	Chairman, Physical Sciences Division
Howard Fenner	Instructor, Television Repair Program
Frank Schuerholz	Guidance Counselor Middletown High School
Anthony Naroff	Director of Continuing Education, BOCES
Sally Freeman	Director, Regional Economic Community Action Program (RECAP)
Donald Fishbeck	Owner, Wallace Oil Company, Middletown Employer
Donald Bialas	Owner, Mid-Tronics, Television Repair Store Employer

SULLIVAN COUNTY COMMUNITY COLLEGE

Richard Crego	President
John Phillips	Dean of the College
William Schneider	Assistant Dean of the College
Guy Goldsmith	Dean of Administration
Edwin Kurlander	Dean of Students
John McCaughey	Assistant to the Dean, Registrar
Murray Salzman	Director of Counseling and Placement
Herbert Lyons	Placement Director
Jerome Gittleman	Librarian
Mortimer Michaels	Member, Board of Trustees
Agnes Manell	Associate Professor; Chairman, Faculty Interest Committee
Ralph Davey	Chairman, Faculty of Civil Technology
Joel Lerner	Chairman, Faculty of Business
Burrell DeHaven	Associate Professor, Medical Lab Assistant Program
Barbara Jones	Associate Professor, English
William Shaw	Instructor, Air and Water Pollution Control Program
Eugene Cohen	Pharmacist Science Curriculum Advisory Committee
Walter Rhulin	President, Rhulin Insurance Company Monticello Advisory Committee Member
J. J. McCarthy	Director of Guidance Sullivan County BOCES
Virginia Commijon	Sullivan County CACHE Employment Counselor

TOMPKINS-CORTLAND COMMUNITY COLLEGE

Hushang Bahar	President
Peter Blomerly	Professor and Dean of the College
Thomas Murphy	Dean of Administration
Thomas V. Mecca	Assistant Professor and Director of Continuing Education
Robert Gould	Associate Professor and Assistant to the Dean for Technologies
Richard Shaw	Director of Financial Aids and Placement
Jack Hewett	Assistant Professor and Director of Admissions
Walter Poland	Assistant Professor and Director of Student Affairs
Nancy Craft	Assistant Professor and Librarian
Helen Hoefer	Member, Board of Trustees
H. Ira Blixt	Member, Board of Trustees
Earl Levengood	Associate Professor and Chairman of Business Technologies
Martha E. Gibbs	Assistant Professor and Director of Licensed Practical Nursing Program
Charles Bechtold	Instructor, Mechanical Technology
Edna Joyce Damery	Instructor, Business Technology
George Schlect	Instructor, Construction Technology
William Pentland	Advisory Committee Member, Mechanical Technology
Frank Saul	Professor of Architecture, Cornell University; Advisory Committee Member, Construction Technology
Cora Schofield	Advisory Committee Member, Human Services Program
Elizabeth Sprague	New York State Electric and Gas Company, Advisory Committee Member, Secretarial Sciences

TOMPKINS-CORTLAND COMMUNITY COLLEGE CONT'D

Jean Strobel	Nursing Supervisor, Tompkins County Hospital; Advisory Committee Member, Licensed Practical Nursing Program
Joan Wright	Professor of Human Ecology, Cornell University; Consultant, Human Services Program
Thomas Mahoney	Tompkins County BOCES BOCES Representative to Business Technology Advisory Committee
Charles Herndon	Executive Director, Tompkins County Equal Opportunity Commission

APPENDIX D

LETTER, STUDENT QUESTIONNAIRE, AND RESULTS

ULSTER COUNTY COMMUNITY COLLEGE

George B. Erbstein	President
Robert Brown	Dean of Administration
Robert J. Markes	Dean of the Faculty
Jean Miles	Admissions Counselor
James Quirk	Counselor
Jeno D. Dory	Assistant to the Registrar
Gordon Kidd	Librarian
Mrs. George F. Bushnell	Member, Board of Trustees
S. Robert Kelder, Sr.	Member, Board of Trustees
James Hadley	Chairman, Division of Engineering Technologies
Walter Hopkins	Chairman, Department of Mechanical Technology
Neil Whitehurst	Chairman, Division of Business
Terry Parmenter	Chairman, Department of Retailing and Business Administration
Joan Beckwith	Assistant Professor of Secretarial Studies
Joseph Keefe	Professor of English
David Smith	Instructor, Landscape Development and Maintenance
George Vizvary	Assistant Professor of Drafting
Lilian Styles	Advisory Council Member (Business)
Ms. Drake	Guidance Counselor, Roundout Valley High School Stone Ridge, New York
John K. Nolfo	Guidance Counselor, Kingston High School
Jack Roosa	Executive Officer, Ulster County BOCES
Michael Aronica	Director of Occupational Education, Ulster County BOCES
Mr. Thompson	Personnel Director, Metropolitan Life Insurance Company Troy, New York

New York State College of Agriculture and Life Sciences
a Statutory College of the State University
Cornell University

Department of Education
Stone Hall
Ithaca, N.Y. 14850

Dear Student:

Will you please take a very few minutes to help with a study of programs like the one in which you are enrolled at college. It will help the study a lot if you will answer the questions (largely a matter of circling choices) and return the completed questionnaire to me in the enclosed, self-addressed and post-paid envelope. I need your response by as early a date as is convenient but no later than May 15. Thank you very much for your help.

My colleagues and I are studying the certificate or diploma programs (largely vocational programs) on the campuses of seven two-year colleges in New York State, including yours. We recently visited your campus to talk individually with instructors, administrators, and counselors.

Now we need the views of you and your fellow students if this study is to give a balanced and complete picture of these programs. The study is designed to find out what conditions make these programs work well or less than well. We need your frank views and comments. Please do not sign the form.

Again, my sincere thanks for your help.

Sincerely,

F. H. Stutz
Professor

FHS:jcs

Questionnaire and Results

1. Who at the College has been helpful to you with your personal problems? (circle as many letters as you wish)

   11% A. A counselor

   49% B. An instructor

   44% C. Friends

   5% D. Others (specify)

   19% E. No one

2. How well do you like the program you are in?

   56% A. Very well

   37% B. Reasonably well

   6% C. Not very well

3. How did you first hear about the program you are now in? From:

   44% A. High school counselor or teacher

   8% B. BOCES counselor or teacher

   6% C. College admissions officer visiting your school

   6% D. A college instructor

   12% E. A visit to campus

   25% F. A friend or relative

   2% G. An employer

   3% H. Newspapers, TV, radio, etc.

   10% I. Other (specify)

4. Why did you choose to enroll in the program you are now in? (circle as many letters as you wish)

67% A. It appealed to me

20% B. It was recommended to me

35% C. It will help me get a job

5% D. It will help me transfer into a degree program

17% E. It follows naturally from my high school or BOCES program.

15% F. Other (specify)

5. Did your high school or BOCES encourage you to enroll in the program?

32% A. Yes

68% B. No

6. How well has the program met your expectations?

43% A. Better than I expected

41% B. About what I expected

17% C. Not as good as I expected

7. Do you think that the College administration believes that your program is as important as others in the College?

46% A. Yes

33% B. No

21% C. Don't know

8. Do you think that students and staff members in other programs believe that your program is as important as others in the College?

37% A. Yes

37% B. No

25% C. Don't know

9. Do you have many friends in the College who are in degree programs?

60% A. Yes

40% B. No

10. Do you think that your program is given enough support (money, equipment, staff) by the College administration?

24% A. Yes

71% B. No

6% C. Don't know

11. In your opinion, how good is the teaching ability of instructors in your program?

64% A. Very good

31% B. Reasonably good

6% C. Not very good

12. In your opinion, how up-to-date in their fields are the instructors in your program?

66% A. Very up-to-date

31% B. Sufficiently up-to-date

3% C. Not sufficiently up-to-date

13. What do you think of the length of your program?

7% A. Too long

68% B. About the right length

25% C. Too short

14. Can you work at your own pace in the program?

60% A. Yes

31% B. No

10% C. Not sure

15. Have you been able to skip those parts of the program in which you had already mastered the skills and information?

19% A. Yes

73% B. No

7% C. Not sure

16. Do you think that there is enough practical work in your program?

74% A. Yes

20% B. No

7% C. Undecided

17. Do you think that there is enough theory in your program?

79% A. Yes

12% B. No

10% C. Undecided

18. Do you have the chance to suggest ways in which the program can be improved?

68% A. Yes

21% B. No

11% C. Not sure

19. Do you expect any serious problems in getting a job after completing this program?

21% A. Yes

54% B. No

25% C. Don't know

20. Who do you turn to for help in finding a job?

21% A. College placement officer

35% B. Instructors in program

21% C. Employer

30% D. Friends

23% E. Family

16% F. No one

10% G. Other (specify)

21. What sort of a job are you seeking (if any) after you complete this program?

_____

22. Please suggest any ways in which you think your program could be improved.

Biographical information (please circle the appropriate letter)

Age:

47% A. 16-19

37% B. 20-23

16% C. Over 23

Sex:

76% A. Male

24% B. Female

Year at the College:

74% A. First

23% B. Second

2% C. Third

Did you come to college directly from:

50% A. High school

12% B. High school-BOCES

16% C. A job

7% D. Homemaking

2% E. Military service

5% F. Unemployment

1% G. Other

APPENDIX E

SELECTED WRITTEN SOURCES OF INFORMATION

Agricultural and Technical College at Alfred

Vocational Division Bulletin

Proposal for an Area Vocational Program

Summary Profile of the Vocational Division

Vocational Division Academic Regulations

Vocational Division Studies 1968-71

Course Outlines of Auto Mechanics Program

Final Budget Request 1972-73

Agricultural and Technical College at Delhi

Vocational Education at Delhi College

Evaluating Educational Outcomes at Delhi 1964-70

Delhi College Self-Evaluating Report 1972

Delhi Placement Center Annual Report 1970-71

Delhi College Handbook

Vocational Education Division, Student Profile, Four-year summary

Vocational Education Division Course Outlines 1971-72

Comparison--1971-72 Appropriation and 1972-73 Executive Budget Request

Hudson Valley Community College

Hudson Valley Community College Catalog 1970-72

Hudson Valley Community College Certificate Program Catalog 1970-72

Hudson Valley Community College Cont'd

3rd Annual Report: SUNY Urban Center in the Capital District, 1968-69

Continuing Education Division Catalog 1971-72

Placement Report 1971-72

Operating Budget Request 1971-72

Revised Operating Budget Request 1971-72

Agreement between the Rensselaer County Legislature, the Board of Trustees of Hudson Valley Community College and the Hudson Valley Community College Faculty Association 1971-72

Orange County Community College

1971-72 Bulletin

Continuing Education Bulletin, Spring 1972

"Factual Data on Practical Electronics and TV Service in Certificate Programs" Prepared by Mr. Howard Fenner, Instructor

Operating Budget Request 1971-72

A Design for the Comprehensive Development of Orange County

Organizational Plan

Recommendations for Counseling and Guidance in Certificate Programs

Area survey of need for TV Servicing Program

Proposal Abstract of Vocational Education Project under VEA Act (for TV Servicing)

Occupational Education Proposal submitted to SED, Vocational Education Act Amendments of 1968 (Public Law 90-576)

Sullivan County Community College

Sullivan County Community College, State University of New York, 1971-72 (General Announcement)

Budget Request Summary 1971-72

President's Annual Report 1970-71

Profile, Sullivan County Community College Entering Class of September 1971

Public Health Technology; Air and Water Pollution Control; One-Year Diploma Program, March, 1969, revised December, 1969
A number of papers on program

Medical Laboratory Assisting; an outline of this program with supporting papers including A Proposal for Authorization of a One-Year Program in Medical Laboratory Assisting leading to a Certificate of Proficiency, April, 1966

Tabular Data of Certificate Programs, 1972

Course Outlines: Business Mathematics (spring 1972), Basic Technical Math (fall 1971-72)

Proposal for Authorization of a One-Year Program in Drafting leading to a Certificate of Proficiency, April, 1966

Tompkins-Cortland Community College

Catalog 1971-72

Request For Approval Of A Curriculum; Associate In Applied Science Degree and Certificate Program In Mechanical Technology--Drafting and Design Option, February, 1971

Request For Approval Of A Curriculum; Associate in Applied Science Degree and Certificate Program in Construction Technology--Architectural Design Option, February, 1971

Demographic-Economic Information On Tompkins and Cortland Counties and Implications for TC3, Robert L. Mann

Program and Master Plan--1980, Robert L. Mann

Tompkins-Cortland Community College Cont'd

Request for Approval of a Certificate Program In Secretarial Studies, Tompkins-Cortland Community College, June, 1971. Survey criteria supporting this request

Program of Practical Nursing--brief description and statistics on the program

Ulster County Community College

Guide to Programs

Ulster County Planning Board--Land Use 1985

Ulster County Population, Economy, Government, Transportation, etc., County Planning Board, 1968

Placement Service

Catalog

Operating Budget 1971-72

State University of New York

"How To Apply For Admission" 1972-72

Memo--The Associate in Occupational Studies Degree
To: Chief Executive Officers of Baccalaureate Institutions
From: Lawrence E. Gray, Chief, Bureau of Two-Year College Programs

Annual Report--Administration of Post-Secondary Occupational Programs in New York State Under the Vocational Education Amendments of 1968 (P.L. 90-576)--1970 and 1971

Outline of a New Curriculum and/or Option Proposal, from the Office of Vice Chancellor for Two-Year Colleges

UNIVERSITY OF CALIF.
LOS ANGELES
AUG 1 1973
CLEARINGHOUSE FOR
JUNIOR COLLEGE
INFORMATION